

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	("5543511").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 10:35
L2	3513	(polysaccharide or carbohydrate) same hydroly\$5 same (carbon dioxide)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 10:44
L3	1015	(polysaccharide or carbohydrate) with hydroly\$5 with(carbon dioxide)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 10:46
L4	36	(polysaccharide or carbohydrate) with hydroly\$5 with "carbon dioxide"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 10:55
L5	320	(polysaccharide or carbohydrate) same hydroly\$5 same "carbon dioxide"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 10:49
L6	284	I5 not I4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 10:49
L7	83	(polysaccharide or carbohydrate or sugar) with hydroly\$5 with "carbon dioxide"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 10:55

EAST Search History

L8	47	l7 not l4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 10:57
L16	1891	536/124.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 10:59
L17	153	l16 and "carbon dioxide"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 12:03
L18	2	"4174976".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/30 12:03

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NEWS	2	JUL 02	LMEDLINE coverage updated
NEWS	3	JUL 02	SCISEARCH enhanced with complete author names
NEWS	4	JUL 02	CHEMCATS accession numbers revised
NEWS	5	JUL 02	CA/CAPplus enhanced with utility model patents from China
NEWS	6	JUL 16	CAPplus enhanced with French and German abstracts
NEWS	7	JUL 18	CA/CAPplus patent coverage enhanced
NEWS	8	JUL 26	USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS	9	JUL 30	USGENE now available on STN
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NEWS	16	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
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NEWS	18	SEP 13	FORIS renamed to SOFIS
NEWS	19	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	20	SEP 17	CA/CAPplus enhanced with printed CA page images from 1967-1998
NEWS	21	SEP 17	CAPplus coverage extended to include traditional medicine patents
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NEWS	24	OCT 19	BEILSTEIN updated with new compounds
NEWS	25	NOV 15	Derwent Indian patent publication number format enhanced
NEWS	26	NOV 19	WPIX enhanced with XML display format
NEWS	27	NOV 30	ICSD reloaded with enhancements
NEWS EXPRESS	19	SEPTEMBER 2007:	CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.
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=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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FILE COVERS 1907 - 30 Nov 2007 VOL 147 ISS 24

FILE LAST UPDATED: 29 Nov 2007 (20071129/ED)

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=> e funazukuri t/au

E1	1	FUNAZU YUKIO/AU
E2	1	FUNAZU YUZO/AU
E3	19 -->	FUNAZUKURI T/AU
E4	72	FUNAZUKURI TOSHITAKA/AU
E5	1	FUNAZUKURI TOSHITAKE/AU
E6	2	FUNAZUKURI YOSHIKAZU/AU
E7	1	FUNAZUMI YOSHIMOTO/AU
E8	1	FUNBASHI MASAYUKI/AU
E9	6	FUNBERG E I/AU
E10	1	FUNBERG ELENA I/AU
E11	1	FUNC F/AU
E12	1	FUNCASTA C G/AU

=> s e3-e5

```
19 "FUNAZUKURI T"/AU
72 "FUNAZUKURI TOSHITAKA"/AU
1 "FUNAZUKURI TOSHITAKE"/AU
L1 92 ("FUNAZUKURI T"/AU OR "FUNAZUKURI TOSHITAKA"/AU OR "FUNAZUKURI
    TOSHITAKE"/AU)
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=> e miyazawa t/au

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E1      1      MIYAZAWA SYOZO/AU
E2      4      MIYAZAWA SYUHEI/AU
E3     160 --> MIYAZAWA T/AU
E4      2      MIYAZAWA TADAHIKO/AU
E5      1      MIYAZAWA TADAO/AU
E6     45      MIYAZAWA TADASHI/AU
E7      8      MIYAZAWA TAKAAKI/AU
E8     11      MIYAZAWA TAKAHIKO/AU
E9      6      MIYAZAWA TAKAHIRO/AU
E10    17      MIYAZAWA TAKAHITO/AU
E11     1      MIYAZAWA TAKAHUMI/AU
E12     2      MIYAZAWA TAKAMARO/AU
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=> e

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E13      3      MIYAZAWA TAKANORI/AU
E14     18      MIYAZAWA TAKAO/AU
E15    180      MIYAZAWA TAKASHI/AU
E16     16      MIYAZAWA TAKATOSHI/AU
E17     89      MIYAZAWA TAKAYUKI/AU
E18      5      MIYAZAWA TAKENORI/AU
E19     75      MIYAZAWA TAKEO/AU
E20     83      MIYAZAWA TAKESHI/AU
E21     47      MIYAZAWA TAKESHIGE/AU
E22      2      MIYAZAWA TAKETSUNE/AU
E23      1      MIYAZAWA TAKEYOSHI/AU
E24      1      MIYAZAWA TAKSHI/AU
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=> e miyazawa tetsuya/au

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E1      20      MIYAZAWA TETSUJI/AU
E2      33      MIYAZAWA TETSUO/AU
E3       6 --> MIYAZAWA TETSUYA/AU
E4     12      MIYAZAWA TOHRU/AU
E5       1      MIYAZAWA TOHU/AU
E6       1      MIYAZAWA TOMIHISA/AU
E7       2      MIYAZAWA TOMIJI/AU
E8       1      MIYAZAWA TOMIO/AU
E9       1      MIYAZAWA TOMIYUKI/AU
E10     37      MIYAZAWA TOMOAKI/AU
E11     16      MIYAZAWA TOMOE/AU
E12      2      MIYAZAWA TOMOHARU/AU
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=> s e3

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L2      6 "MIYAZAWA TETSUYA"/AU
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=> d his

(FILE 'HOME' ENTERED AT 11:08:20 ON 30 NOV 2007)

FILE 'CAPLUS' ENTERED AT 11:08:28 ON 30 NOV 2007

E FUNAZUKURI T/AU

L1 92 S E3-E5

E MIYAZAWA T/AU

E MIYAZAWA TETSUYA/AU

L2 6 S E3

=> dup remove l1 l2

PROCESSING COMPLETED FOR L1

PROCESSING COMPLETED FOR L2

L3 93 DUP REMOVE L1 L2 (5 DUPLICATES REMOVED)

=> l3 and "carbon dioxide"

L4 92 S L3

L5 1 S L3

1324464 "CARBON"

28197 "CARBONS"

1334462 "CARBON"

("CARBON" OR "CARBONS")

509256 "DIOXIDE"

6821 "DIOXIDES"

510986 "DIOXIDE"

("DIOXIDE" OR "DIOXIDES")

242838 "CARBON DIOXIDE"

("CARBON" (W) "DIOXIDE")

L6 42 (L4 OR L5) AND "CARBON DIOXIDE"

=> l6 and hydroly?

628350 HYDROLY?

L7 3 L6 AND HYDROLY?

=> d l7 1-3 ibib abs

L7 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:221593 CAPLUS

DOCUMENT NUMBER: 144:473756

TITLE: Decomposition of acetamide and formamide in
pressurized hot water

AUTHOR(S): Okazaki, M.; Funazukuri, T.

CORPORATE SOURCE: Department of Applied Chemistry, Chuo University,
1-13-27 Kasuga, Bunkyo-ku, Tokyo, 112-8551, Japan

SOURCE: Journal of Materials Science (2006), 41(5), 1517-1521

CODEN: JMTSAS; ISSN: 0022-2461

PUBLISHER: Springer

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Acetamide and formamide were individually decomposed in pressurized hot water in a tubular flow reactor at temps. from 573 K to 693 K and pressure of 23 MPa, residence times up to 500 s, and initial concns. of both amides of 0.005 to 0.5 mol/L. The major products were ammonia and acetic acid from decomposition of acetamide, and ammonia and formic acid from that of formamide. Formic acid was further decomposed readily into carbon dioxide. Although the decomposition reactions for both amides were represented acceptably by first-order reaction kinetics, the rate consts. increased with increasing initial sample concns. due to the autocatalytic effect. Apparently, second-order reaction kinetics with respect to the concentration of each amide remaining better represented the global decomposition

rates, and the rate consts. decreased with increasing initial concns. The effects of added hydrogen peroxide on the global decomposition rates and the product yields were not evident: the addition slightly lowered the rates, but the major products were almost the same as those in the absence of hydrogen peroxide at temps. lower than 653 K. Above 653 K more CO₂ was produced.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1071119 CAPLUS

DOCUMENT NUMBER: 144:24131

TITLE: Polysaccharide Hydrolysis Accelerated by Adding Carbon Dioxide under Hydrothermal Conditions

AUTHOR(S): Miyazawa, Tetsuya; Funazukuri, Toshitaka

CORPORATE SOURCE: Department of Applied Chemistry, Chuo University, Tokyo, 112-8551, Japan

SOURCE: Biotechnology Progress (2005), 21(6), 1782-1785

CODEN: BIPRET; ISSN: 8756-7938

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Polysaccharides such as agar, guar gum, starch, and xylan were hydrolyzed to produce mono- and oligosaccharides under hydrothermal conditions with and without carbon dioxide in a small batch reactor. The mol. weight distributions of the polysaccharide hydrolyzates shifted to lower mol. wts. by increasing the carbon dioxide load, corresponding to higher pressures of carbon dioxide. For example, the yield of glucose produced from the hydrolysis of starch at 200 °C was increased significantly from 3.7% to 53.0% (on a carbon weight basis) of the initial polysaccharide by increasing carbon dioxide load in a reaction time of 15 min. Carbonic acid generated from water and carbon dioxide appeared to lower the pH of high-temperature and high-pressure water. Polysaccharide hydrolysis under hydrothermal conditions in the presence of carbon dioxide is an environmentally benign method to produce mono- and oligosaccharides because the process does not require the use of conventional acids and bases followed by neutralization and separation

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:472357 CAPLUS

DOCUMENT NUMBER: 143:9410

TITLE: Method of hydrolyzing organic compound

INVENTOR(S): Funazukuri, Toshitaka; Miyazawa, Tetsuya

PATENT ASSIGNEE(S): Tama-TLO Corporation, Japan

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005049869	A1	20050602	WO 2004-JP17638	20041119
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1686192	A1	20060802	EP 2004-799840	20041119
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
CN 1906310	A	20070131	CN 2004-80040661	20041119
US 2007267008	A1	20071122	US 2007-579741	20070323
PRIORITY APPLN. INFO.:			JP 2003-393118	A 20031121
			WO 2004-JP17638	W 20041119
AB The <u>hydrolysis</u> of an organic compound (especially, polysaccharide such as starch, agar, guar gum or cellulose) is done by using hot water at 5-100 MPa and 140-300° under pressurized solubilized CO2.				
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT				

=> e bergfeld manfred/au

E1	4	BERGFELD LUDWIG/AU
E2	2	BERGFELD M/AU
E3	69 -->	BERGFELD MANFRED/AU
E4	1	BERGFELD MANFRED ING GRAD/AU
E5	2	BERGFELD MANFRED J/AU
E6	9	BERGFELD MANFRED JOSEF/AU
E7	2	BERGFELD MICHELE/AU
E8	5	BERGFELD MICHELE A/AU
E9	2	BERGFELD MICHELLE/AU
E10	1	BERGFELD MICHELLE A/AU
E11	1	BERGFELD P/AU
E12	1	BERGFELD PAUL/AU

=> s e2-e6

	2	"BERGFELD M"/AU
	69	"BERGFELD MANFRED"/AU
	1	"BERGFELD MANFRED ING GRAD"/AU
	2	"BERGFELD MANFRED J"/AU
	9	"BERGFELD MANFRED JOSEF"/AU
L8	83	("BERGFELD M"/AU OR "BERGFELD MANFRED"/AU OR "BERGFELD MANFRED ING GRAD"/AU OR "BERGFELD MANFRED J"/AU OR "BERGFELD MANFRED JOSEF"/AU)

=> s l8 and "carbon dioxide"

1324464	"CARBON"
28197	"CARBONS"
1334462	"CARBON"
	("CARBON" OR "CARBONS")

509256 "DIOXIDE"
6821 "DIOXIDES"
510986 "DIOXIDE"
("DIOXIDE" OR "DIOXIDES")
242838 "CARBON DIOXIDE"
("CARBON" (W) "DIOXIDE")

L9 2 L8 AND "CARBON DIOXIDE"

=> d 19 1-2

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1998:13679 CAPLUS
DN 128:89085
TI Preparation of betaine carbonic esters from alkylene oxides and

carbon dioxide
IN Ihrig, Klaus; Bergfeld, Manfred
PA Akzo Nobel N.V., Neth.
SO Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DT Patent
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 812821	A1	19971217	EP 1997-109372	19970610
	EP 812821	B1	20001129		
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	ES 2153622	T3	20010301	ES 1997-109372	19970610
PRAI	DE 1996-19623324	A	19960612		
OS	CASREACT 128:89085				

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1995:886074 CAPLUS
DN 123:260169
TI Preparation of level degree of polymerization cellulose

IN Bergfeld, Manfred Josef; Seifert, Juergen
PA Akzo Nobel N.V., Neth.
SO Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 657472	A1	19950614	EP 1994-119200	19941206
	R: AT, BE, DE, ES, FR, GB, IE, IT, NL, SE				
	DE 4342442	A1	19950614	DE 1993-4342442	19931213
	DE 4342442	C2	19961121		
	CA 2137890	A1	19950614	CA 1994-2137890	19941212
	JP 07206901	A	19950808	JP 1994-308014	19941212
	US 5543511	A	19960806	US 1994-354788	19941212
	FI 9405856	A	19950614	FI 1994-5856	19941213
	FI 107929	B1	20011031		
	BR 9404978	A	19950808	BR 1994-4978	19941213
PRAI	DE 1993-4342442	A	19931213		

=> d his

(FILE 'HOME' ENTERED AT 11:08:20 ON 30 NOV 2007)

FILE 'CAPLUS' ENTERED AT 11:08:28 ON 30 NOV 2007

 E FUNAZUKURI T/AU
L1 92 S E3-E5
 E MIYAZAWA T/AU
 E MIYAZAWA TETSUYA/AU
L2 6 S E3
L3 93 DUP REMOVE L1 L2 (5 DUPLICATES REMOVED)
L4 92 S L3
L5 1 S L3
L6 42 L3 AND "CARBON DIOXIDE"
L7 3 L6 AND HYDROLY?
 E BERGFELD MANFRED/AU
L8 83 S E2-E6
L9 2 S L8 AND "CARBON DIOXIDE"

=>

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	41.34	41.55
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-2.34	-2.34

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NEWS	5	JUL 02	CA/CAPplus enhanced with utility model patents from China
NEWS	6	JUL 16	CAPplus enhanced with French and German abstracts
NEWS	7	JUL 18	CA/CAPplus patent coverage enhanced
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NEWS EXPRESS	19	SEPTEMBER 2007:	CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.
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* * * * * STN Columbus * * * * *

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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FILE LAST UPDATED: 29 Nov 2007 (20071129/ED)

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<http://www.cas.org/infopolicy.html>

=> (carbohydrate or polysaccharide or sugar) and hydroly? and "carbon dioxide"

133551 CARBOHYDRATE

155123 CARBOHYDRATES

224818 CARBOHYDRATE

(CARBOHYDRATE OR CARBOHYDRATES)

63204 POLYSACCHARIDE

79902 POLYSACCHARIDES

100533 POLYSACCHARIDE

(POLYSACCHARIDE OR POLYSACCHARIDES)

269328 SUGAR

132355 SUGARS

341069 SUGAR

(SUGAR OR SUGARS)

628350 HYDROLY?
 1324464 "CARBON"
 28197 "CARBONS"
 1334462 "CARBON"
 ("CARBON" OR "CARBONS")
 509256 "DIOXIDE"
 6821 "DIOXIDES"
 510986 "DIOXIDE"
 ("DIOXIDE" OR "DIOXIDES")
 242838 "CARBON DIOXIDE"
 ("CARBON" (W) "DIOXIDE")
 L1 434 (CARBOHYDRATE OR POLYSACCHARIDE OR SUGAR) AND HYDROLY? AND "CARB
 ON DIOXIDE"

=> d his

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FILE 'CAPLUS' ENTERED AT 11:12:03 ON 30 NOV 2007
 L1 434 (CARBOHYDRATE OR POLYSACCHARIDE OR SUGAR) AND HYDROLY? AND "CAR

=> s l1 and prep/rl
 4496022 PREP/RL
 L2 135 L1 AND PREP/RL

=> s l2 and py<=2003
 23956048 PY<=2003
 L3 98 L2 AND PY<=2003

=> d l3 1-98 ibib kwic

L3 ANSWER 1 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:528114 CAPLUS
 DOCUMENT NUMBER: 141:37645
 TITLE: An improved process for the preparation of ethanol by
 fermentation of molasses and other fermentable
sugar containing substances
 INVENTOR(S): Venkitakrishnan, Guruvayur Raja; Nene, Sanhay Narayan;
 Chaphekar, Gopal Moreshwar; Jagtap, Himmatrao Sakharam
 PATENT ASSIGNEE(S): Council of Scientific & Industrial Research, India
 SOURCE: Indian, 19 pp.
 CODEN: INXXAP
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 182183	A1	19990123	IN 1991-DE947	19911001 <--
PRIORITY APPLN. INFO.:			IN 1991-DE947	19911001
OTHER SOURCE(S):	CASREACT 141:37645			
TI	An improved process for the preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances			
PI	IN 182183 A1 <u>19990123</u>			

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	IN 182183	A1	19990123	IN 1991-DE947	19911001 <--
AB	An improved process for the preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances which comprises:.				
	Mixing the molasses or other fermentable <u>sugar</u> containing substances in the range of 5 to 16%. Heating the mixture to a temperature in the range of 98. . . .				
IT	pH (biol. effects of; improved process for preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances)				
IT	Industrial liquors (corn steep liquor; improved process for preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances)				
IT	Separation (decantation; improved process for preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances)				
IT	Fermentation (ethanol; improved process for preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances)				
IT	Distillation Molasses Separation Temperature effects, biological Yeast (improved process for preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances)				
IT	<u>Carbohydrates</u> , processes Protein <u>hydrolyzates</u> RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process) (improved process for preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances)				
IT	Separators (settlers; improved process for preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances)				
IT	57-13-6, Urea, processes 7487-88-9, Magnesium sulfate, processes 7783-20-2, Ammonium sulfate, processes 14265-44-2, Phosphate, processes RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process) (improved process for preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances)				
IT	64-17-5P, Ethanol, preparation RL: BMF (Bioindustrial manufacture); BIOL (Biological study); <u>PREP</u> <u>(Preparation)</u> (improved process for preparation of ethanol by fermentation of molasses and other fermentable <u>sugar</u> containing substances)				
IT	124-38-9P, <u>Carbon dioxide</u> , preparation RL: BYP (Byproduct); PUR (Purification or recovery); <u>PREP</u> <u>(Preparation)</u>				

(improved process for preparation of ethanol by fermentation of molasses and other

fermentable sugar containing substances)

IT 7440-70-2D, Calcium, salts

RL: FMU (Formation, unclassified); REM (Removal or disposal); FORM (Formation, nonpreparative); PROC (Process)

(improved process for preparation of ethanol by fermentation of molasses and other

fermentable sugar containing substances)

L3 ANSWER 2 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:61730 CAPLUS

DOCUMENT NUMBER: 140:256124

TITLE: Production of reducing cellulignin through the biomass refinery

AUTHOR(S): Pinatti, Daltro Garcia; Soares, Alvaro Guedes; Conte, Rosa Ana; Lopes, Claudio Rocha; Romao, Erica Leonor; de Oliveira, Isaias

CORPORATE SOURCE: Departamento de Engenharia de Materiais, FAENQUIL, Lorena-SP, Brazil

SOURCE: Congresso Anual - Associacao Brasileira de Metalurgia e Materiais (2003), 58th, 1338-1347
CODEN: CAAMEU

PUBLISHER: Associacao Brasileira de Metalurgia e Materiais

DOCUMENT TYPE: Journal; (computer optical disk)

LANGUAGE: English

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SO Congresso Anual - Associacao Brasileira de Metalurgia e Materiais (2003), 58th, 1338-1347
CODEN: CAAMEU

AB . . . not pollute, it performs thermochem. sequential cracking of any biomass and it consists of 6 stages or units. Dilute acidic pre-hydrolysis - biomass is cracked to a sugar solution called a pre-hydrolyzate and cellulignin powder with 20 MJ/kg of heating power and a low ash content. The pre-hydrolyzate is converted to furfural in the furfural reactor. The effluent treatment station generates sludge and recycles water to the biomass. . . can replace feldspar in the ceramic industry. The integral use of biomass allows competition with fossil fuels and chems. The pre-hydrolysis reactor is mobile and processes raw biomass in parking lots annex to their production The cost of the cellulignin ranges. . .

IT Feldspar-group minerals

RL: IMF (Industrial manufacture); PREP (Preparation)

(in vitrification of nanometer-sized ash obtained in biomass refining for production of ceramic tiles)

IT Carbon black, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(production of carbon black through biomass refining)

IT Coal, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(production of carbonaceous fuel for metallurgical purposes through biomass refining)

IT 7440-44-0P, Activated carbon, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(activated; production of activated carbon through biomass refining)

IT 13397-24-5P, Gypsum, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)
 (production of agricultural gypsum through biomass refining)
 IT 98-01-1P, Furfural, preparation
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (production of furfural through biomass refining)
 IT 406699-93-2P, Cellulignin
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (production of reducing cellulignin through biomass refining)
 IT 124-38-9, Carbon dioxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactivity of cellulignin produced through biomass refining with)

L3 ANSWER 3 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:919092 CAPLUS
 DOCUMENT NUMBER: 141:20362
 TITLE: Method for extracting active ingredients from marine algae
 INVENTOR(S): Cen, Yingzhou
 PATENT ASSIGNEE(S): Jinan University, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1389476	A	20030108	CN 2002-134322	20020709 <--
PRIORITY APPLN. INFO.:			CN 2002-134322	20020709
PI CN 1389476 A	<u>20030108</u>			

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 1389476	A	20030108	CN 2002-134322	20020709 <--

AB . . . soaking marine algae especially Sargassum fusiforme, Eucheuma muricatum

and Caulerpa sertularioides in acid solution; precipitating with ethanol to obtain

crude polysaccharides; hydrolyzing crude polysaccharides with HCl at 75-80° to obtain polysaccharide hydrolyzate with different mol. weight; extracting the polysaccharide-extracted algae with ethanol, concentrating, extracting under supercrit. condition, separating on high-speed countercurrent chromatog. column with Et acetate-acetone-water (5:4:1) as eluent to obtain caulerpin; extracting the polysaccharide-extracted algae with Et acetate, concentrating, separating on high-speed countercurrent chromatog. column with ethanol-acetone-water (5:3:2) as eluent, hydrolyzing with acid of pH 2-3, and extracting under supercrit. condition to obtain EPA and DHA.

ST polysaccharide caulerpin EPA DHA extn alga; solvent extn polysaccharide algae

IT Polysaccharides, preparation

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PYP (Physical process); PREP (Preparation); PROC (Process)

(extracting active ingredients from marine algae)

IT 6217-54-5P, DHA 10417-94-4P, EPA 26612-48-6P, Caulerpin

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PYP (Physical process); PREP (Preparation); PROC (Process)

(extracting active ingredients from marine algae)

IT 124-38-9, Carbon dioxide, uses

RL: NUU (Other use, unclassified); USES (Uses)

(extracting active ingredients from marine algae)

L3 ANSWER 4 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:590726 CAPLUS

DOCUMENT NUMBER: 139:116338

TITLE: Separation of ethanol fermented from biomass fermentation broth using carbon dioxide

INVENTOR(S): Lightner, Gene E.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 6 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003143704	A1	20030731	US 2001-912893	20010725 <--
PRIORITY APPLN. INFO.:			US 2001-912893	20010725

TI Separation of ethanol fermented from biomass fermentation broth using carbon dioxide

PI US 2003143704 A1 20030731

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003143704	A1	20030731	US 2001-912893	20010725 <--

AB This is a method to remove ethanol from fermentation of sugars contained in a vessel. By providing carbon dioxide, containing ethanol, to the vessel, ethanol and volatile compds. formed by fermentation are humidified by the carbon dioxide. A supply of sugars for fermentation within the vessel is employed to form ethanol and carbon dioxide. Upon combining carbon dioxide, produced by fermentation, with the carbon dioxide, containing ethanol, ethanol humidified carbon dioxide is formed. Resulting humidified carbon dioxide is removed from the fermentation vessel and subjected to means for condensing ethanol from humidified carbon dioxide to supply carbon dioxide, containing ethanol, for recycle, and purged carbon dioxide, containing ethanol, to remove carbon dioxide produced by fermentation. Fermentation broth is removed from the vessel to maintain vessel level.

Thereby ethanol is condensed from the humidified carbon dioxide to produce ethanol and carbon dioxide, containing ethanol, for recycle and removing carbon dioxide produced by fermentation and maintaining broth level within the fermentation vessel.

A detailed description and schematics are included.

ST ethanol sepn fermn carbon dioxide vapor

IT Hydrolysis

(acid, of biomass; separation of ethanol fermented from biomass fermentation broth using carbon dioxide)

IT pH (biol. effects of; separation of ethanol fermented from biomass fermentation broth using carbon dioxide)

IT Fermentation (ethanol; separation of ethanol fermented from biomass fermentation broth using carbon dioxide)

IT Fermentation (extractive; separation of ethanol fermented from biomass fermentation broth using carbon dioxide)

IT Biomass
Condensation (physical)
Distillation
Raoult's law
Vapor pressure
(separation of ethanol fermented from biomass fermentation broth using carbon dioxide)

IT 50-99-7, Dextrose, processes 58-86-6, D-Xylose, processes 9034-32-6, Hemicellulose 11132-73-3, Lignocellulose
RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(separation of ethanol fermented from biomass fermentation broth using carbon dioxide)

IT 124-38-9, Carbon dioxide, processes
RL: BCP (Biochemical process); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(separation of ethanol fermented from biomass fermentation broth using carbon dioxide)

IT 64-17-5P, Ethanol, preparation
RL: BMF (Bioindustrial manufacture); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(separation of ethanol fermented from biomass fermentation broth using carbon dioxide)

L3 ANSWER 5 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:576912 CAPLUS

DOCUMENT NUMBER: 140:6990

TITLE: Influence of chemical nature of organic wastes on their conversion to hydrogen by heat-shock digested sludge

AUTHOR(S): Lay, Jiunn-Jyi; Fan, Kuo-Shuh; Chang, James-l; Ku, Chia-Hung

CORPORATE SOURCE: Health and Environmental Engineering, Department of Safety, National Kaohsiung First University of Science and Technology, Kaohsiung, Yanchau, Taiwan

SOURCE: International Journal of Hydrogen Energy (2003), 28(12), 1361-1367

CODEN: IJHEDX; ISSN: 0360-3199

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

- SO International Journal of Hydrogen Energy (2003), 28(12),
1361-1367
CODEN: IJHEDX; ISSN: 0360-3199
- AB . . . were filled with 10% total solid of rice, potato, fat meat,
chicken skin, egg, and lean meat. Hydrogen-producing potential of
carbohydrate-rich HSOW (rice and potato) was .apprx.20 times
larger than that of fat-rich HSOW (fat meat and chicken skin) and of. .
. sludge; that is Clostridium-rich sludge, converting fat- and
protein-rich HSOW to hydrogen; but the pH threshold for Clostridium-rich
sludge consuming carbohydrates-rich HSOW occurred at .apprx.5.0.
The ammonium production from proteins both consumes hydrogen and affects the
pH. In bulk solution, volatile fatty acids (VFA) and alcs. occurred
concurrently and the trends of carbohydrate-rich HSOW were
similar to those of protein-rich HSOW. Considering developments of
carbohydrates and VFAs together with that of hydrogen one infers
that lipids would be hydrolyzed to carbohydrates and
the carbon flow would proceed through acetate/H₂ + CO₂ cleavage.
Indications from cluster anal. of pH development trends are that a
co-metabolism would be obtained in wastes rich in carbohydrate and
protein.
- IT Alcohols, preparation
RL: BCP (Biochemical process); BYP (Byproduct); BIOL (Biological study);
PREP (Preparation); PROC (Process)
(C2-4; influence of chemical nature of organic wastes on their conversion to
hydrogen by heat-shock digested sludge)
- IT Carbohydrates, preparation
RL: BCP (Biochemical process); BYP (Byproduct); BIOL (Biological study);
PREP (Preparation); PROC (Process)
(influence of chemical nature of organic wastes on their conversion to
hydrogen by heat-shock digested sludge)
- IT Hydrolysis
(of fats to free fatty acids; influence of chemical nature of organic wastes
on their conversion to hydrogen by heat-shock digested sludge)
- IT Fatty acids, preparation
RL: BCP (Biochemical process); BYP (Byproduct); BIOL (Biological study);
PREP (Preparation); PROC (Process)
(short-chain, C2-C4; influence of chemical nature of organic wastes on their
conversion to hydrogen by heat-shock digested sludge)
- IT 1333-74-0P, Hydrogen, preparation
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP
(Preparation)
(influence of chemical nature of organic wastes on their conversion to
hydrogen by heat-shock digested sludge)
- IT 74-82-8P, Methane, preparation 14798-03-9P, Ammonium, preparation
RL: BYP (Byproduct); PREP (Preparation)
(influence of chemical nature of organic wastes on their conversion to
hydrogen by heat-shock digested sludge)
- IT 124-38-9, Carbon dioxide, formation (nonpreparative)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(influence of chemical nature of organic wastes on their conversion to
hydrogen by heat-shock digested sludge)

L3 ANSWER 6 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:80058 CAPLUS

DOCUMENT NUMBER: 138:275331

TITLE: Title V permitting strategies for a waste to ethanol
production facility

AUTHOR(S): Liang, Kit Y.; Li, Ramon; Webster, David
CORPORATE SOURCE: Malcolm Pirnie, Inc., USA
SOURCE: Proceedings of the Air & Waste Management Association's Annual Conference & Exhibition, 95th, Baltimore, MD, United States, June 23-27, 2002 (2002), 4326-4333. Air & Waste Management Association: Pittsburgh, Pa.
CODEN: 69DMAK; ISBN: 0-923204-45-8

DOCUMENT TYPE: Conference; (computer optical disk)
LANGUAGE: English

SO Proceedings of the Air & Waste Management Association's Annual Conference & Exhibition, 95th, Baltimore, MD, United States, June 23-27, 2002 (2002), 4326-4333 Publisher: Air & Waste Management Association, Pittsburgh, Pa.
CODEN: 69DMAK; ISBN: 0-923204-45-8

AB . . . facility. The facility is designed to use municipal solid waste (MSW) and sewage sludge to produce fuel grade ethanol and carbon dioxide (CO2) through a concentrated acid hydrolysis-fermentation process. Best Available Control Technologies (BACT) are included in the facility design: wet scrubbers for controlling acid and odors, lime. . .

IT Carbohydrates, reactions
RL: BSU (Biological study, unclassified); FMU (Formation, unclassified); RCT (Reactant); BIOL (Biological study); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(Title V permitting strategies for waste to ethanol production facility)

IT Hydrolysis
(acid; Title V permitting strategies for waste to ethanol production facility)

IT 124-38-9, Carbon dioxide, processes
RL: BSU (Biological study, unclassified); CPS (Chemical process); FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); POL (Pollutant); REM (Removal or disposal); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PROC (Process)
(Title V permitting strategies for waste to ethanol production facility)

IT 64-17-5P, Ethanol, processes
RL: BSU (Biological study, unclassified); CPS (Chemical process); IMF (Industrial manufacture); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(fuel; Title V permitting strategies for waste to ethanol production facility)

L3 ANSWER 7 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:923527 CAPLUS
DOCUMENT NUMBER: 138:71940
TITLE: On-line estimation of sugar concentration for control of fed-batch fermentation of lignocellulosic hydrolyzates by *Saccharomyces cerevisiae*

AUTHOR(S): Nilsson, A.; Taherzadeh, M. J.; Liden, G.
CORPORATE SOURCE: Department of Chemical Engineering II, Lund Institute of Technology, Lund, SE-221 00, Swed.
SOURCE: Bioprocess and Biosystems Engineering (2002), 25(3), 183-191
CODEN: BBEIBV; ISSN: 1615-7591
PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

- TI On-line estimation of sugar concentration for control of fed-batch fermentation of lignocellulosic hydrolyzates by *Saccharomyces cerevisiae*
- SO Bioprocess and Biosystems Engineering (2002), 25(3), 183-191
CODEN: BBEIBV; ISSN: 1615-7591
- AB A feed control strategy, based on estimated sugar concns., was developed with the purpose of avoiding severe inhibition of the yeast *Saccharomyces cerevisiae* during fermentation of spruce hydrolyzate. The sum of the fermentable hexose sugars, glucose and mannose, was estimated from online measurements of carbon dioxide evolution rate and biomass concentration by use of a simple stoichiometric model.

The feed rate of the hydrolyzate was controlled to maintain constant sugar concentration during fed-batch fermentation, and the effect of different set-point concns. was investigated using both untreated and detoxified hydrolyzates. The fed-batch cultivations were evaluated with respect to cellular physiol. in terms of the specific ethanol productivities, ethanol yields, and viability of the yeast. The simple stoichiometric model used resulted in a good agreement between estimated sugar concns. and off-line detns. of sugar concns. Furthermore, the control strategy used made it possible to maintain a constant sugar concentration without major oscillations in the feed rate or the sugar concentration. For untreated hydrolyzates the average ethanol productivity could be increased by more than 130% compared to batch fermentation. The average ethanol productivity was increased from 0.12 to 0.28 g/g h. The productivity also increased for detoxified hydrolyzates, where an increase of 16% was found (from 0.50 to 0.58 g/g h).

- IT Ion exchange chromatography
(anal.; online estimation of sugar concentration for control of fed-batch fermentation of lignocellulosic hydrolyzates by *Saccharomyces cerevisiae*)
- IT Fermentation
(ethanol; online estimation of sugar concentration for control of fed-batch fermentation of lignocellulosic hydrolyzates by *Saccharomyces cerevisiae*)
- IT Fermentation
(fed-batch; online estimation of sugar concentration for control of fed-batch fermentation of lignocellulosic hydrolyzates by *Saccharomyces cerevisiae*)
- IT Simulation and Modeling
(for feeding control; online estimation of sugar concentration for control of fed-batch fermentation of lignocellulosic hydrolyzates by *Saccharomyces cerevisiae*)
- IT Picea
(hydrolyzate of; online estimation of sugar concentration for control of fed-batch fermentation of lignocellulosic hydrolyzates by *Saccharomyces cerevisiae*)
- IT Flow injection analysis
(of hexoses; online estimation of sugar concentration for control of fed-batch fermentation of lignocellulosic hydrolyzates by *Saccharomyces cerevisiae*)

IT Saccharomyces cerevisiae
 (online estimation of sugar concentration for control of fed-batch fermentation
 of lignocellulosic hydrolyzates by Saccharomyces cerevisiae)

IT Process control
 (online; online estimation of sugar concentration for control of fed-batch fermentation of lignocellulosic hydrolyzates by Saccharomyces cerevisiae)

IT 11132-73-3, Lignocellulose
 RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
 (hydrolyzates; online estimation of sugar concentration for control of fed-batch fermentation of lignocellulosic hydrolyzates by Saccharomyces cerevisiae)

IT 50-99-7, Dextrose, analysis 58-86-6, D-Xylose, analysis 59-23-4, D-Galactose, analysis 3458-28-4, D-Mannose 5328-37-0, L-Arabinose
 RL: ANT (Analyte); BCP (Biochemical process); ANST (Analytical study); BIOL (Biological study); PROC (Process)
 (online estimation of sugar concentration for control of fed-batch fermentation
 of lignocellulosic hydrolyzates by Saccharomyces cerevisiae)

IT 64-17-5P, Ethanol, preparation
 RL: ANT (Analyte); BMF (Bioindustrial manufacture); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
 (online estimation of sugar concentration for control of fed-batch fermentation
 of lignocellulosic hydrolyzates by Saccharomyces cerevisiae)

IT 124-38-9P, Carbon dioxide, preparation
 RL: ANT (Analyte); BYP (Byproduct); ANST (Analytical study); PREP (Preparation)
 (online estimation of sugar concentration for control of fed-batch fermentation
 of lignocellulosic hydrolyzates by Saccharomyces cerevisiae)

IT 56-81-5P, Glycerol, preparation
 RL: BYP (Byproduct); PREP (Preparation)
 (online estimation of sugar concentration for control of fed-batch fermentation
 of lignocellulosic hydrolyzates by Saccharomyces cerevisiae)

IT 64-19-7, Acetic acid, formation (nonpreparative) 67-47-0, Hydroxymethylfurfural 98-01-1, Furfural, formation (nonpreparative)
 RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
 (online estimation of sugar concentration for control of fed-batch fermentation
 of lignocellulosic hydrolyzates by Saccharomyces cerevisiae)

L3 ANSWER 8 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:814762 CAPLUS

DOCUMENT NUMBER: 137:309616

TITLE: High speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars

INVENTOR(S): Dale, M. Clark; Moelhman, Mark

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 17 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002155583	A1	20021024	US 2002-56063	20020128 <--
US 6861248	B2	20050301		
US 2005019932	A1	20050127	US 2004-921182	20040819
US 7070967	B2	20060704		

PRIORITY APPLN. INFO.: US 2001-264070P P 20010126
US 2002-56063 A1 20020128

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI High speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars

PI US 2002155583 A1 20021024

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002155583	A1	20021024	US 2002-56063	20020128 <--
US 6861248	B2	20050301		
US 2005019932	A1	20050127	US 2004-921182	20040819
US 7070967	B2	20060704		

AB A flocculent *Saccharomyces cerevisiae* strain (BPSC-15) produces higher yields of ethanol in ferms. of fermentable sugar or fermentable starch/enzyme. Thus, *Saccharomyces cerevisiae* strain BPSC-15 was employed for rapid fermentation of molasses, corn syrup, or starch using. . .

IT Residence time
(average; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)

IT Molasses
(beet; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)

IT Flocculation
(bioflocculation; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)

IT pH
(biol. effects of; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)

IT Fermentation
(continuous; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)

IT Industrial liquors
(corn steep liquor; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)

IT Fermentation
(ethanol; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)

IT Aeration
Agitation (mechanical)
Reynolds number
Saccharomyces cerevisiae
Simulation and Modeling

- Temperature effects, biological
(high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)
- IT Syrups (sweetening agents)
(hydrolyzed starch; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)
- IT Cell morphology
(pellets; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)
- IT Distillery slops
(recycle of; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)
- IT Fermentation wastes
(recycling of; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)
- IT Fermentation
(repeat batch; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)
- IT Fermentation apparatus
(tower fermentor; high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)
- IT 50-99-7, Dextrose, processes 57-50-1, Sucrose, processes 9005-25-8, Starch, processes
RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)
- IT 64-17-5P, Ethanol, preparation
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
(high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)
- IT 56-81-5P, Glycerol, preparation 124-38-9P, Carbon dioxide, preparation
RL: BYP (Byproduct); PREP (Preparation)
(high speed, consecutive batch or continuous, low effluent process for the production of ethanol from molasses, starches, or sugars)

L3 ANSWER 9 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:675761 CAPLUS

DOCUMENT NUMBER: 137:184820

TITLE: Process for the fractionation of cereal brans

INVENTOR(S): Kvist, Sten; Carlsson, Tommie; Lawther, John Mark;
Basile de Castro, Fernando

PATENT ASSIGNEE(S): Biovelop International B.V., Neth.

SOURCE: PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002067698	A1	20020906	WO 2002-SE309	20020221 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
SE 2001000655	A	20020827	SE 2001-655	20010226 <--
SE 521559	C2	20031111		
SE 2001003328	A	20020827	SE 2001-3328	20011004 <--
SE 526999	C2	20051206		
CA 2438270	A1	20020906	CA 2002-2438270	20020221 <--
AU 2002233865	A1	20020912	AU 2002-233865	20020221 <--
AU 2002233865	B2	20070712		
EP 1363504	A1	20031126	EP 2002-700929	20020221 <--
EP 1363504	B1	20060531		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004520058	T	20040708	JP 2002-567080	20020221
BR 2002007552	A	20040914	BR 2002-7552	20020221
AT 327683	T	20060615	AT 2002-700929	20020221
RU 2295868	C2	20070327	RU 2003-128880	20020221
US 2005089602	A1	20050428	US 2003-643402	20030819
PRIORITY APPLN. INFO.:				
			SE 2001-655	A 20010226
			SE 2001-3328	A 20011004
			WO 2002-SE309	W 20020221

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

PI	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002067698	A1	20020906	WO 2002-SE309	20020221 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
	SE 2001000655	A	20020827	SE 2001-655	20010226 <--
	SE 521559	C2	20031111		
	SE 2001003328	A	20020827	SE 2001-3328	20011004 <--
	SE 526999	C2	20051206		
	CA 2438270	A1	20020906	CA 2002-2438270	20020221 <--
	AU 2002233865	A1	20020912	AU 2002-233865	20020221 <--
	AU 2002233865	B2	20070712		
	EP 1363504	A1	20031126	EP 2002-700929	20020221 <--
	EP 1363504	B1	20060531		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					

	JP 2004520058	T	20040708	JP 2002-567080	20020221
	BR 2002007552	A	20040914	BR 2002-7552	20020221
	AT 327683	T	20060615	AT 2002-700929	20020221
	RU 2295868	C2	20070327	RU 2003-128880	20020221
	US 2005089602	A1	20050428	US 2003-643402	20030819

AB . . . phys. separating the main bran factions, i.e. insol. phase (pericarp and aleurone layer), germ-rich fraction, residual endosperm fraction and soluble sugars. A second step consists of fractionating cereal brans substantially free of soluble compds., hence insol. phase from the above-mentioned first. . .

IT Fats and Glyceridic oils, biological studies
 RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (cereal germ; process for the fractionation of cereal brans)

IT Proteins
 RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (fat-binding; process for the fractionation of cereal brans)

IT Sterols
 RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (phyto-; process for the fractionation of cereal brans)

IT Fat substitutes
 Glycolipids
 Lecithins
 Lignans
 Monosaccharides
 Phospholipids, biological studies
 Protein hydrolyzates
 RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (process for the fractionation of cereal brans)

IT Carbohydrates, preparation
 Oligosaccharides, preparation
 Proteins
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (process for the fractionation of cereal brans)

IT Fats and Glyceridic oils, biological studies
 RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (rye germ; process for the fractionation of cereal brans)

IT Fats and Glyceridic oils, biological studies
 RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (wheat germ; process for the fractionation of cereal brans)

IT 69-79-4P, Maltose 1109-28-0P, Maltotriose 1406-18-4P, Vitamin E 9040-27-1P, Arabinoxylan 9041-22-9P, β -Glucan 78473-71-9P, Enterolactone
 RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (process for the fractionation of cereal brans)

IT 9034-32-6P, Hemicellulose
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (process for the fractionation of cereal brans)

IT 124-38-9, Carbon dioxide, biological studies
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
 (supercrit.; process for the fractionation of cereal brans)

L3 ANSWER 10 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:670762 CAPLUS

DOCUMENT NUMBER: 137:351543

TITLE: Supercritical fluid extraction of a lignocellulosic hydrolysate of spruce for detoxification and to facilitate analysis of inhibitors

AUTHOR(S): Persson, Per; Larsson, Simona; Jonsson, Leif J.; Nilvebrant, Nils-Olof; Sivik, Bjorn; Munteanu, Florentina; Thorneby, Lars; Gorton, Lo

CORPORATE SOURCE: Department of Analytical Chemistry, Lund University, Lund, SE-22100, Swed.

SOURCE: Biotechnology and Bioengineering (2002), 79(6), 694-700

CODEN: BIBIAU; ISSN: 0006-3592

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Supercritical fluid extraction of a lignocellulosic hydrolysate of spruce for detoxification and to facilitate analysis of inhibitors

SO Biotechnology and Bioengineering (2002), 79(6), 694-700
CODEN: BIBIAU; ISSN: 0006-3592

AB This work describes a novel approach to detoxify lignocellulosic hydrolyzates and facilitate the anal. of inhibitory compds., namely supercrit. fluid extraction (SFE). The efficiency of the fermentation of

lignocellulosic dilute-acid hydrolyzates depends upon the composition of the hydrolyzate and the organism used. Furthermore, it has been shown that inhibitors in the hydrolyzate reduce the fermentation yield. This knowledge has given rise to the need to identify and remove the inhibiting compds. Sample. . . a clean and concentrated sample for the anal. system, facilitate the characterization of inhibitors, or indeed any compound in the hydrolyzates. Removal of inhibitors was performed with countercurrent flow supercrit. fluid extraction of liquid hydrolyzates. Three different groups of inhibitors (furan derivs., phenolic compds., and aliphatic acids) and sugars were subsequently analyzed in the hydrolyzate, extracted hydrolyzate, and extract The effect of the SFE treatment was examined with respect to fermentability with Saccharomyces cerevisiae. Not only did the extraction provide a clean and concentrated sample (extract) for anal., but also

a hydrolyzate with increased fermentability as well as lower concns. of inhibitors such as phenolics and furan derivs.

ST supercrit fluid extn lignocellulose hydrolyzate detoxification

IT Hydrolysis

(acid; supercrit. fluid extraction of a spruce lignocellulose hydrolyzate for detoxification and to facilitate anal. of inhibitors)

IT Fermentation

(ethanol; supercrit. fluid extraction of a spruce lignocellulose hydrolyzate for detoxification and to facilitate anal. of inhibitors)

IT Picea

(supercrit. fluid extraction of a spruce lignocellulose hydrolyzate for detoxification and to facilitate anal. of inhibitors)

IT Carboxylic acids, analysis
Phenols, analysis
RL: ANT (Analyte); FMU (Formation, unclassified); REM (Removal or disposal); ANST (Analytical study); FORM (Formation, nonpreparative); PROC (Process)
(supercrit. fluid extraction of a spruce lignocellulose hydrolyzate for detoxification and to facilitate anal. of inhibitors)

IT Extraction
(supercrit.; supercrit. fluid extraction of a spruce lignocellulose hydrolyzate for detoxification and to facilitate anal. of inhibitors)

IT Stress, microbial
(toxic; supercrit. fluid extraction of a spruce lignocellulose hydrolyzate for detoxification and to facilitate anal. of inhibitors)

IT 64-18-6, Formic acid, analysis 64-19-7, Acetic acid, analysis 67-47-0, 5-Hydroxymethylfurfural 98-01-1, Furfural, analysis 99-96-7, 4-Hydroxybenzoic acid, analysis 121-33-5, Vanillin 121-34-6, Vanillic acid 123-76-2, Levulinic acid 458-36-6, Coniferyl aldehyde 498-02-2, Acetoguaiacone 2034-60-8 2034-61-9 2503-46-0 4899-73-4 4899-74-5
RL: ANT (Analyte); FMU (Formation, unclassified); REM (Removal or disposal); ANST (Analytical study); FORM (Formation, nonpreparative); PROC (Process)
(supercrit. fluid extraction of a spruce lignocellulose hydrolyzate for detoxification and to facilitate anal. of inhibitors)

IT 64-17-5P, Ethanol, preparation
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
(supercrit. fluid extraction of a spruce lignocellulose hydrolyzate for detoxification and to facilitate anal. of inhibitors)

IT 124-38-9, Carbon dioxide, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(supercrit. fluid extraction of a spruce lignocellulose hydrolyzate for detoxification and to facilitate anal. of inhibitors)

IT 11132-73-3, Lignocellulose
RL: RCT (Reactant); RACT (Reactant or reagent)
(supercrit. fluid extraction of a spruce lignocellulose hydrolyzate for detoxification and to facilitate anal. of inhibitors)

L3 ANSWER 11 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:624516 CAPLUS

DOCUMENT NUMBER: 137:124298

TITLE: Process for preparing liquid for hydrogen fermentation from carbohydrate, protein, and organic acid

INVENTOR(S): Shen, Jianquan

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1328158	A	20011226	CN 2000-108095	20000614 <--

PRIORITY APPLN. INFO.: CN 2000-108095 20000614

TI Process for preparing liquid for hydrogen fermentation from carbohydrate, protein, and organic acid

PI CN 1328158 A 20011226

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	CN 1328158	A	20011226	CN 2000-108095	20000614 <--
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AB The liquid used for H2 fermentation is prepared by hydrolyzing carbohydrate and protein-containing raw material (such as grains) with water at room temperature for 1-4 m under bubbling N2 or CO2. . .

IT Fermentation
(anaerobic; process for preparing liquid for hydrogen fermentation from carbohydrate, protein, and organic acid)

IT Cereal (grain)
Temperature effects, biological
(process for preparing liquid for hydrogen fermentation from carbohydrate, protein, and organic acid)

IT Carbohydrates, reactions
Carboxylic acids, reactions
Proteins
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for preparing liquid for hydrogen fermentation from carbohydrate, protein, and organic acid)

IT 1333-74-0P, Hydrogen, preparation
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(process for preparing liquid for hydrogen fermentation from carbohydrate, protein, and organic acid)

IT 124-38-9, Carbon dioxide, biological studies
7727-37-9, Nitrogen, biological studies 7782-44-7, Oxygen, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(process for preparing liquid for hydrogen fermentation from carbohydrate, protein, and organic acid)

L3 ANSWER 12 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:323665 CAPLUS

DOCUMENT NUMBER: 137:51412

TITLE: Mass production of methane from food wastes with concomitant wastewater treatment

AUTHOR(S): Kim, Jung K.; Cho, Jae H.; Lee, Jung S.; Hahm, Kyung S.; Park, Don H.; Kim, Si W.

CORPORATE SOURCE: Department of Environmental Engineering, Chosun University, Gwangju, 501-759, S. Korea

SOURCE: Applied Biochemistry and Biotechnology (2002), 98-100(Biotechnology for Fuels and Chemicals), 753-764

CODEN: ABIBDL; ISSN: 0273-2289

PUBLISHER: Humana Press Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SO Applied Biochemistry and Biotechnology (2002), 98-100(Biotechnology for Fuels and Chemicals), 753-764
CODEN: ABIBDL; ISSN: 0273-2289

AB . . . for production of methane at a pilot scale. This process consists of

three stages. The first stage is a semianaerobic hydrolysis /acidogenic step in which organic wastes are converted to various sugars, amino acids, and volatile fatty acids (VFAs). Operation temperature and pH were 45°C, and 5.0-5.5, resp. Hydraulic retention time (HRT) was 2 d. To remove the putrid odor and to enhance the hydrolysis of organic wastes, a mixture of bacteria isolated from landfill soil was inoculated into the reactor. Total COD (tCOD) and . . and 5.0-5.5, resp. HRT was 2 d. The third stage was a strictly anaerobic methane fermentation step producing methane and carbon dioxide from VFAs. The working volume of upflow anaerobic sludge blanket (UASB) type reactor was 1200 L, and operation temperature and. . .

- IT Fatty acids, processes
 RL: BCP (Biochemical process); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
 (short-chain; methane production from food wastes with concomitant wastewater treatment)
- IT 64-19-7P, Acetic acid, processes 79-09-4P, Propanoic acid, processes
 107-92-6P, Butanoic acid, processes 109-52-4P, Pentanoic acid, processes
 142-62-1P, Hexanoic acid, processes
 RL: BCP (Biochemical process); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
 (methane production from food wastes with concomitant wastewater treatment)
- IT 74-82-8P, Methane, preparation
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
 (methane production from food wastes with concomitant wastewater treatment)
- IT 124-38-9P, Carbon dioxide, preparation
 RL: BYP (Byproduct); PREP (Preparation)
 (methane production from food wastes with concomitant wastewater treatment)

L3 ANSWER 13 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:3080 CAPLUS
 DOCUMENT NUMBER: 136:219450
 TITLE: Direct splitting of water under visible light irradiation with an oxide semiconductor photocatalyst
 AUTHOR(S): Zou, Zhlgang; Ye, Jinhua; Sayama, Kazuhro; Arakawa, Hironori
 CORPORATE SOURCE: Photoreaction Control Research Center, National Institute of Advanced Industrial Science and Technology, Tsukuba, Ibaraki, 305-8565, Japan
 SOURCE: Nature (London, United Kingdom) (2001), 414(6864), 625-627
 CODEN: NATUAS; ISSN: 0028-0836
 PUBLISHER: Nature Publishing Group
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
 SO Nature (London, United Kingdom) (2001), 414(6864), 625-627
 CODEN: NATUAS; ISSN: 0028-0836

AB . . . dean and renewable source for hydrogen fuel. The first photocatalysts suitable for water splitting, or for activating hydrogen production from carbohydrate compds. made by plants from water and carbon dioxide, were developed several decades ago. But these catalysts operate with UV light, which accounts for only 4% of the incoming. . .

IT Hydrolysis

(photochem., photocatalytic; direct splitting of water under visible light irradiation with oxide semiconductor photocatalyst)

IT 1333-74-0P, Hydrogen, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(direct splitting of water under visible light irradiation with oxide semiconductor photocatalyst)

L3 ANSWER 14 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:327 CAPLUS

DOCUMENT NUMBER: 136:198976

TITLE: Metabolic study of the adaptation of the yeast *Candida guilliermondii* to sugarcane bagasse

hydrolysate

AUTHOR(S): Sene, L.; Converti, A.; Zilli, M.; Felipe, M. G. A.; Silva, S. S.

CORPORATE SOURCE: Department of Chemical and Process Engineering "G. B. Bonino", University of Genoa, Genoa, 16145, Italy

SOURCE: Applied Microbiology and Biotechnology (2001), 57(5-6), 738-743

CODEN: AMBIDG; ISSN: 0175-7598

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Metabolic study of the adaptation of the yeast *Candida guilliermondii* to sugarcane bagasse hydrolysate

SO Applied Microbiology and Biotechnology (2001), 57(5-6), 738-743
CODEN: AMBIDG; ISSN: 0175-7598

AB Batch xylitol production from concentrated sugarcane bagasse hydrolyzate by *Candida guilliermondii* was performed by progressively adapting the cells to the medium. Samples were analyzed to monitor sugar and acetic acid consumption, xylitol, arabitol, ethanol, and carbon dioxide production, as well as cell growth. Both xylitol yield and volumetric productivity remarkably increased with the number of adaptations, demonstrating. . . that the ore adapted the cells, the better the capacity of the yeast to reduce xylose to xylitol in hemicellulose hydrolyzates. Substrate and product concns. were used in carbon material balances to study in which way the different carbon sources were.

ST *Candida* adaptation hydrolyzed bagasse xylitol fermn

IT Fermentation

(batch; metabolic study of adaptation of yeast *Candida guilliermondii* to sugarcane bagasse hydrolyzate)

IT Growth, microbial

(exponential; metabolic study of adaptation of yeast *Candida guilliermondii* to sugarcane bagasse hydrolyzate)

IT Bagasse

(hydrolyzate; metabolic study of adaptation of yeast *Candida guilliermondii* to sugarcane bagasse hydrolyzate)

IT Growth, microbial

(lag phase; metabolic study of adaptation of yeast *Candida guilliermondii* to sugarcane bagasse hydrolyzate)

IT Adaptation, microbial

Candida guilliermondii

Energy metabolism, microbial

Respiration, microbial

- (metabolic study of adaptation of yeast *Candida guilliermondii* to sugarcane bagasse hydrolyzate)
- IT Growth, microbial
(stationary phase; metabolic study of adaptation of yeast *Candida guilliermondii* to sugarcane bagasse hydrolyzate)
- IT 50-99-7, Dextrose, processes 58-86-6, D-Xylose, processes 64-19-7, Acetic acid, processes 10323-20-3, D-Arabinose
RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(metabolic study of adaptation of yeast *Candida guilliermondii* to sugarcane bagasse hydrolyzate)
- IT 87-99-0P, Xylitol
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
(metabolic study of adaptation of yeast *Candida guilliermondii* to sugarcane bagasse hydrolyzate)
- IT 64-17-5P, Ethanol, preparation 124-38-9P, Carbon dioxide, preparation 2152-56-9P, Arabitol
RL: BYP (Byproduct); PREP (Preparation)
(metabolic study of adaptation of yeast *Candida guilliermondii* to sugarcane bagasse hydrolyzate)

L3 ANSWER 15 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:781702 CAPLUS

DOCUMENT NUMBER: 136:70178

TITLE: Well-defined glycopolymer amphiphiles for liquid and supercritical carbon dioxide applications

AUTHOR(S): Ye, Weijun; Wells, Sharon; Desimone, Joseph M.

CORPORATE SOURCE: Department of Chemistry, NSF Science and Technology Center for Environmentally Responsible Solvents and Processes, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599-3290, USA

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2001), 39(21), 3841-3849
CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Well-defined glycopolymer amphiphiles for liquid and supercritical carbon dioxide applications

SO Journal of Polymer Science, Part A: Polymer Chemistry (2001), 39(21), 3841-3849
CODEN: JPACEC; ISSN: 0887-624X

AB . . . Their solubility in CO₂ was heavily influenced by the amphiphilic structure, such as the copolymer compns. and the polarities of sugar block. Light-scattering studies showed that, after removal of the protective groups, the deprotected block copolymer formed aggregate structures in liquid. . .

ST glucose glycopolymer block copolymer prepn anionic polymn; carbon dioxide amphiphile glucose glycopolymer block copolymer fluoropolymer

IT Polymerization
(anionic; preparation and properties of well-defined glycopolymer amphiphiles for liquid and supercrit. carbon dioxide applications)

- IT Amphiphiles
Molecular weight
Molecular weight distribution
Solubility
Supercritical fluids
(preparation and properties of well-defined glycopolymer amphiphiles for liquid and supercrit. carbon dioxide applications)
- IT Fluoropolymers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(preparation and properties of well-defined glycopolymer amphiphiles for liquid and supercrit. carbon dioxide applications)
- IT 6613-70-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(monomer; preparation and properties of well-defined glycopolymer amphiphiles for liquid and supercrit. carbon dioxide applications)
- IT 124-38-9, Carbon dioxide, properties
RL: PRP (Properties)
(preparation and properties of well-defined glycopolymer amphiphiles for liquid and supercrit. carbon dioxide applications)
- IT 25101-93-3P 373593-92-1DP, hydrolyzed 373593-92-1P
RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(preparation and properties of well-defined glycopolymer amphiphiles for liquid and supercrit. carbon dioxide applications)
- IT 582-52-5 760-93-0, Methacrylic anhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; preparation and properties of well-defined glycopolymer amphiphiles for liquid and supercrit. carbon dioxide applications)

L3 ANSWER 16 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:744280 CAPLUS

DOCUMENT NUMBER: 136:36454

TITLE: Continuous cultivation of dilute-acid
hydrolysates to ethanol by immobilized
Saccharomyces cerevisiae

AUTHOR(S): Taherzadeh, Mohammad J.; Millati, Ria; Niklasson,
Claes

CORPORATE SOURCE: Department of Chemical Reaction Engineering, Chalmers
University of Technology, Goteborg, S-412 96, Swed.

SOURCE: Applied Biochemistry and Biotechnology (2001
, 95(1), 45-57

CODEN: ABIBDL; ISSN: 0273-2289

PUBLISHER: Humana Press Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:36454

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Continuous cultivation of dilute-acid hydrolysates to ethanol by
immobilized Saccharomyces cerevisiae

SO Applied Biochemistry and Biotechnology (2001), 95(1), 45-57

CODEN: ABIBDL; ISSN: 0273-2289

AB The continuous cultivation of immobilized Saccharomyces cerevisiae CBS

- 8066 on dilute-acid hydrolyzates of forest residuals was investigated. The yeast cells were immobilized in 2-4% Ca-alginate beads. The 2% beads were not stable.. . . 3 wk when an extra resource of calcium ions was available in the medium. The continuous cultivation of a dilute-acid hydrolyzate by the immobilized cells at dilution rates of 0.3, 0.5, and 0.6 h⁻¹ resulted in 86, 83, and 79% sugar consumption, resp., and an ethanol yield between 0.45 and 0.48 g/g. The hydrolyzate was fermentable at a dilution rate of 0.1 h⁻¹ in a free-cell system but washed out at a dilution rate of 0.2 h⁻¹. The continuous cultivation of a more inhibiting hydrolyzate was not successful by either free- or immobilized-cell systems even at a low dilution rate of 0.07 h⁻¹. However, when the hydrolyzate was overlimed, it was fermentable by the immobilized cells at a dilution rate of 0.2 h⁻¹.
- ST Saccharomyces immobilized continuous ethanol fermn acid wood
- IT hydrolyzate
- IT Hydrolysis
(acid; continuous cultivation of dilute-acid hydrolyzates to ethanol by immobilized Saccharomyces cerevisiae)
- IT Wood
(chips, acid hydrolyzate from; continuous cultivation of dilute-acid hydrolyzates to ethanol by immobilized Saccharomyces cerevisiae)
- IT Saccharomyces cerevisiae
(continuous cultivation of dilute-acid hydrolyzates to ethanol by immobilized Saccharomyces cerevisiae)
- IT Fermentation
(continuous; continuous cultivation of dilute-acid hydrolyzates to ethanol by immobilized Saccharomyces cerevisiae)
- IT Immobilization, molecular or cellular
(microbial cell; continuous cultivation of dilute-acid hydrolyzates to ethanol by immobilized Saccharomyces cerevisiae)
- IT Stress, microbial
(toxic; continuous cultivation of dilute-acid hydrolyzates to ethanol by immobilized Saccharomyces cerevisiae)
- IT 50-99-7, Dextrose, processes 58-86-6, D-Xylose, processes 59-23-4, D-Galactose, processes 3458-28-4, D-Mannose
RL: BCP (Biochemical process); FMU (Formation, unclassified); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(continuous cultivation of dilute-acid hydrolyzates to ethanol by immobilized Saccharomyces cerevisiae)
- IT 64-17-5P, Ethanol, preparation
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(continuous cultivation of dilute-acid hydrolyzates to ethanol by immobilized Saccharomyces cerevisiae)
- IT 14127-61-8, Ca²⁺, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(continuous cultivation of dilute-acid hydrolyzates to ethanol by immobilized Saccharomyces cerevisiae)
- IT 9005-35-0, Calcium alginate
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(continuous cultivation of dilute-acid hydrolyzates to ethanol by immobilized Saccharomyces cerevisiae)
- IT 56-81-5P, Glycerol, preparation 64-19-7P, Acetic acid, preparation 110-15-6P, Succinic acid, preparation 124-38-9P, Carbon

dioxide, preparation 127-17-3P, Pyruvic acid, preparation

RL: BYP (Byproduct); PREP (Preparation)

(continuous cultivation of dilute-acid hydrolyzates to ethanol
by immobilized *Saccharomyces cerevisiae*)

IT 98-01-1, Furfural, formation (nonpreparative) 25376-49-2,
Hydroxymethylfurfural

RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(continuous cultivation of dilute-acid hydrolyzates to ethanol
by immobilized *Saccharomyces cerevisiae*)

L3 ANSWER 17 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:713444 CAPLUS

DOCUMENT NUMBER: 135:257625

TITLE: Polyurethane foams prepared from polyisocyanate and
various polyols

INVENTOR(S): Katoot, Mohammad W.; Katoot, Ahmed M.

PATENT ASSIGNEE(S): Kt Holdings, Llc, USA

SOURCE: PCT Int. Appl., 81 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001070842	A2	20010927	WO 2001-US8888	20010320 <--
WO 2001070842	A3	20020131		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-190642P P 20000320

PI WO 2001070842 A2 20010927

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001070842	A2	20010927	WO 2001-US8888	20010320 <--
WO 2001070842	A3	20020131		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AB . . . the reaction product of a polyol selected from a fatty acid, a
glycol, a vegetable oil, a mineral oil, a carbohydrate, a syrup,
or a polyol blend comprising combination thereof with a polyisocyanate in
the presence of a catalyst and atomic . . .

ST polyurethane foam polyol polyisocyanate; fattyacid glycol

- carbohydrate syrup polyol; vegetable oil fatty acid glycol
carbohydrate syrup polyol; mineral oil fatty acid glycol
carbohydrate syrup polyol
- IT Syrups (sweetening agents)
 (hydrolyzed starch, polymers with polyisocyanate;
 polyurethane foams prepared from polyisocyanate and various polyols)
- IT Polyurethanes, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES
 (Uses)
 (polyurethane foams prepared from polyisocyanate and various polyols)
- IT Plastic foams
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (polyurethane foams prepared from polyisocyanate and various polyols)
- IT 67-66-3, Chloroform, uses 109-66-0, Pentane, uses 124-38-9,
Carbon dioxide, uses 7732-18-5, Water, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (blowing agent; polyurethane foams prepared from polyisocyanate and
 various polyols)
- IT 56-81-5D, Glycerol, polymers with polyisocyanate 57-50-1D, Sucrose,
 optionally aminified, polymers with polyisocyanate 63-42-3D, Lactose,
 polymers with polyisocyanate 101-68-8D, 4,4'-Diphenyl methane
 diisocyanate, polymers with polyol, a fatty acid, a mineral oil, a
carbohydrate, or a combination thereof 107-21-1D, Ethylene
 Glycol, polymers with polyisocyanate 9003-01-4D, Polyacrylic acid,
 polymers with polyisocyanate 9004-32-4D, Carboxymethyl cellulose,
 polymers with polyisocyanate 9051-34-7, Polyethylene glycol
 dimethacrylate homopolymer 25249-16-5, 2-Hydroxyethylmethacrylate
 homopolymer 25265-71-8D, Dipropylene glycol, polymers with
 polyisocyanate 25322-68-3D, PEG 400, polymers with polyisocyanate
 34012-52-7, Fumaric acid-maleic anhydride-phthalic anhydride-propylene
 glycol copolymer 57592-66-2, Pentaerythritol tetraacrylate homopolymer
 75634-62-7, Niox L 5340 106392-12-5, AntaroX 25R2 361484-11-9, Verimac
 755-8590
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (polyurethane foams prepared from polyisocyanate and various polyols)

L3 ANSWER 18 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:662075 CAPLUS

DOCUMENT NUMBER: 135:372061

TITLE: Living anionic polymerizations of well-defined
sugar-containing diblock fluorocopolymer and
 its application in CO2 emulsion polymerizations

AUTHOR(S): Ye, Weijun; DeSimone, Joseph M.

CORPORATE SOURCE: Department of Chemistry, University of North Carolina
 at Chapel Hill, Chapel Hill, NC, 27599-3290, USA

SOURCE: Polymer Preprints (American Chemical Society, Division
 of Polymer Chemistry) (2001), 42(2), 340-341
 CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer
 Chemistry

DOCUMENT TYPE: Journal; (computer optical disk)

LANGUAGE: English

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

- TI Living anionic polymerizations of well-defined sugar-containing diblock fluorocopolymer and its application in CO₂ emulsion polymerizations
- SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2001), 42(2), 340-341
CODEN: ACPPAY; ISSN: 0032-3934
- AB Well-defined sugar-containing diblock copolymers of 3-O-methacryloyl-1,2:5,6-di-O-isopropylidene- α -D-glucofuranose (MAIpGlc) and 1,1-dihydroperfluorooctyl methacrylate (FOMA) have been prepared by sequential living anionic polymerization in THF atomic . . .
predictable
mol. wts. and very narrow mol. distributions (MWD, Mw/Mn < 1.16). Removal of acetal protection groups from the protected polysaccharide block was carried out using 90 % trifluoroacetic acid at room temperature, yielding a hydrophilic block copolymer with pendant glucose. . .
- ST glucofuranose methacryloyl isopropylidene living anionic polymn dihydroperfluorooctyl methacrylate; amphiphile glucofuranose fluoro polymethacrylate synthesis emulsion stabilization carbon dioxide; ethylacrylamide emulsion polymn carbon dioxide block glucofuranose fluoro polymethacrylate
- IT Fluoropolymers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(block, emulsion stabilizer; preparation of well-defined sugar-containing diblock fluoro copolymer by living anionic polymns. and its application in CO₂ emulsion polymns.)
- IT Amphiphiles
Emulsifying agents
(preparation of well-defined sugar-containing diblock fluoro copolymer by living anionic polymns. and its application in CO₂ emulsion polymns.)
- IT 373593-92-1DP, hydrolyzed 731773-43-6DP, hydrolyzed
RL: NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(diblock, emulsion stabilizer; preparation of well-defined sugar-containing diblock fluoro copolymer by living anionic polymns. and its application in CO₂ emulsion polymns.)
- IT 124-38-9, Carbon dioxide, uses
RL: NUU (Other use, unclassified); USES (Uses)
(emulsion polymerization medium; preparation of well-defined sugar-containing
diblock fluoro copolymer by living anionic polymns. and its application in CO₂ emulsion polymns.)
- IT 25215-59-2P, N-Ethylacrylamide homopolymer
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of well-defined sugar-containing diblock fluoro copolymer by living anionic polymns. and its application in CO₂ emulsion polymns.)

L3 ANSWER 19 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:536807 CAPLUS

DOCUMENT NUMBER: 135:287572

TITLE: Use of dynamic step response for control of fed-batch conversion of lignocellulosic hydrolyzates to ethanol

AUTHOR(S): Nilsson, A.; Taherzadeh, M. J.; Liden, G.

CORPORATE SOURCE: Department of Chemical Engineering II, Lund University

SOURCE: of Technology, Lund, SE-22100, Swed.
Journal of Biotechnology (2001), 89(1),
41-53
CODEN: JBITD4; ISSN: 0168-1656
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:287572
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

- TI Use of dynamic step response for control of fed-batch conversion of
lignocellulosic hydrolyzates to ethanol
- SO Journal of Biotechnology (2001), 89(1), 41-53
CODEN: JBITD4; ISSN: 0168-1656
- AB Optimization of fed-batch conversion of lignocellulosic
hydrolyzates by the yeast *Saccharomyces cerevisiae* was studied.
The feed rate was controlled using a step response strategy, in which the
carbon dioxide evolution rate was used as input
variable. The performance of the control strategy was examined using both
an untreated and a detoxified dilute acid hydrolyzate, and the
performance was compared to that obtained with a synthetic medium. In
batch cultivation of the untreated hydrolyzate, only 23% of the
hexose sugars were assimilated. However, by using the feed-back
controlled fed-batch technique, it was possible to obtain complete
conversion of the hexose sugars. Furthermore, the maximal
specific ethanol productivity (q_E, \max) increased more than 10-fold, from
0.06 to 0.70 g g⁻¹ h⁻¹. In addition, . . . in batch cultivation, whereas a
viability of more than 40% could be maintained during fed-batch
cultivation. In contrast to untreated hydrolyzate, it was
possible to convert the sugars in the detoxified
hydrolyzate also in batch cultivation. However, a 50% higher
specific ethanol productivity was obtained using fed-batch cultivation.
During batch cultivation of both untreated and detoxified
hydrolyzate a gradual decrease in specific ethanol productivity
was observed. This decrease could largely be avoided in fed-batch
cultivations.
- IT Process control
(computerized; use of dynamic step response for control of fed-batch
conversion of lignocellulosic hydrolyzates to ethanol)
- IT Fermentation
(ethanol; use of dynamic step response for control of fed-batch
conversion of lignocellulosic hydrolyzates to ethanol)
- IT Fermentation
(fed-batch; use of dynamic step response for control of fed-batch
conversion of lignocellulosic hydrolyzates to ethanol)
- IT Process control
(online; use of dynamic step response for control of fed-batch
conversion of lignocellulosic hydrolyzates to ethanol)
- IT *Saccharomyces cerevisiae*
Simulation and Modeling, biological
(use of dynamic step response for control of fed-batch conversion of
lignocellulosic hydrolyzates to ethanol)
- IT 11132-73-3, Lignocellulose
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(hydrolyzate; use of dynamic step response for control of
fed-batch conversion of lignocellulosic hydrolyzates to

- ethanol)
- IT 64-19-7, Acetic acid, biological studies
 RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
 (use of dynamic step response for control of fed-batch conversion of lignocellulosic hydrolyzates to ethanol)
- IT 67-47-0, 5-Hydroxy-methylfurfural 98-01-1, Furfural, biological studies
 RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (use of dynamic step response for control of fed-batch conversion of lignocellulosic hydrolyzates to ethanol)
- IT 124-38-9, Carbon dioxide, biological studies
 RL: ANT (Analyte); BSU (Biological study, unclassified); MFM (Metabolic formation); ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative)
 (use of dynamic step response for control of fed-batch conversion of lignocellulosic hydrolyzates to ethanol)
- IT 64-17-5P, Ethanol, preparation
 RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
 (use of dynamic step response for control of fed-batch conversion of lignocellulosic hydrolyzates to ethanol)
- IT 50-99-7, D-Glucose, biological studies 58-86-6, D-Xylose, biological studies 59-23-4, D-Galactose, biological studies 3458-28-4, D-Mannose 5328-37-0, L-Arabinose
 RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
 (use of dynamic step response for control of fed-batch conversion of lignocellulosic hydrolyzates to ethanol)

L3 ANSWER 20 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:445431 CAPLUS

DOCUMENT NUMBER: 135:179742

TITLE: Development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar

AUTHOR(S): Springfield, R. M.; Hester, R. D.

CORPORATE SOURCE: Mississippi Polymer Technologies, Bay Saint Louis, MS, 39520, USA

SOURCE: Separation Science and Technology (2001), 36(5 & 6), 911-930

CODEN: SSTEDS; ISSN: 0149-6395

PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar

SO Separation Science and Technology (2001), 36(5 & 6), 911-930

CODEN: SSTEDS; ISSN: 0149-6395

AB The emission of large quantities of the greenhouse gas carbon dioxide into the atmospheric, as well as our increasing dependence on foreign oil supplies and the need to stimulate the lagging farm economy,

has prompted research in the production of renewable liquid fuels from lignocellulosic materials. Acid hydrolysis of the cellulosic fraction of these materials into sugars that can be fermented to ethanol is one option. In support of this approach, a simulated moving bed ion exclusion chromatog. system was constructed for the continuous separation of the product sugars from the acid used to effect hydrolysis. A numerical simulation model of the process is presented here. Our system consisted of 4 zones of 18 resin-packed columns, . . .

ST simulated moving bed system model sepn acid sugar

IT Hydrolysis

(acid; development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar)

IT Ion exclusion chromatography
Separation

Simulation and Modeling, physicochemical

(development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar)

IT Hexoses

Pentoses

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)

(development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar)

IT Fermentation

(ethanol; development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar)

IT Reactors

(moving-bed, simulated; development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar)

IT 64-17-5P, ethanol, preparation

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar)

IT 11132-73-3, Lignocellulose

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar)

IT 9004-34-6, Cellulose, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)

(development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar)

IT 7664-93-9, sulfuric acid, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar)

IT 9005-53-2, Lignin, processes

RL: REM (Removal or disposal); PROC (Process)

(development and modeling of a continuous simulated moving bed ion exclusion process for the separation of acid and sugar)

L3 ANSWER 21 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:437290 CAPLUS

DOCUMENT NUMBER: 135:179772

TITLE: Kinetic analysis of growth and xanthan gum production with *Xanthomonas campestris* on sucrose, using sequentially consumed nitrogen sources

AUTHOR(S): Letisse, Fabien; Chevallereau, Paule; Simon, Jean-Luc; Lindley, Nic D.

CORPORATE SOURCE: Laboratoire des Recherches Techniques, Rhodia Food, Melle, 79500, Fr.

SOURCE: Applied Microbiology and Biotechnology (2001), 55(4), 417-422

CODEN: AMBIDG; ISSN: 0175-7598

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SO Applied Microbiology and Biotechnology (2001), 55(4), 417-422

CODEN: AMBIDG; ISSN: 0175-7598

AB . . . established in which all essential medium components are supplied at the onset. This has been achieved using sucrose as sole sugar feedstock. Sequential consumption of nitrogen sources (soybean hydrolyzates, ammonium and nitrate salts) was observed to facilitate the further optimization of the medium. Biomass accumulation was limited by phosphate availability. Xanthan yields of more than 60% (grams of xanthan per g of sugar) have been obtained with constant acetyl content. However, pyruvyl substitution decreased as the growth rate declined, due to the metabolic. . .

IT Protein hydrolyzates

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(soya, hydrolyzate; kinetic anal. of growth and xanthan gum production with *Xanthomonas campestris* on sucrose, using sequentially consumed nitrogen sources)

IT 11138-66-2P, Xanthan gum

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(kinetic anal. of growth and xanthan gum production with *Xanthomonas campestris* on sucrose, using sequentially consumed nitrogen sources)

IT 124-38-9, Carbon dioxide, biological studies

RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)

(kinetic anal. of growth and xanthan gum production with *Xanthomonas campestris* on sucrose, using sequentially consumed nitrogen sources)

L3 ANSWER 22 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:372586 CAPLUS

DOCUMENT NUMBER: 135:137637

TITLE: Synthesis of functionalized enantiopure steroids from estrone and cholestanone through organolithium intermediates

AUTHOR(S): Yus, M.; Soler, T.; Foubelo, F.

CORPORATE SOURCE: Facultad de Ciencias, Departamento de Quimica Organica, Universidad de Alicante, Alicante, 03080, Spain

SOURCE: Tetrahedron: Asymmetry (2001), 12(5),

801-810
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:137637
REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

- SO Tetrahedron: Asymmetry (2001), 12(5), 801-810
CODEN: TASYE3; ISSN: 0957-4166
- AB . . . these intermediates with different electrophiles [E = H₂O, D₂O, PhCHO, Me₂CO, Et₂CO, (CH₂)₅CO, CO₂] at -78 to 20°C afforded, after hydrolysis with water, enantiomerically pure derivs. (I) and (II), resp. When protected ketones derived from D-glucose and D-fructose were used as the electrophile, the reaction gave the expected mixed products which consist of a steroid and a carbohydrate fragment. The reaction of O-protected estrone as the electrophilic component and intermediate afforded the C2-sym. steroid dimer. The stereochem. of. .
- IT 53-16-7, Estrone, reactions 67-64-1, Acetone, reactions 96-22-0, 3-Pentanone 100-52-7, Benzaldehyde, reactions 108-94-1, Cyclohexanone, reactions 124-38-9, Carbon dioxide, reactions 493-05-0 496-14-0 566-88-1 2847-00-9 18422-53-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of functionalized enantiopure steroids from estrone and cholestanone through organolithium intermediates)
- IT 18744-05-3P 290294-89-2P 352196-19-1P 352196-20-4P 352196-29-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of functionalized enantiopure steroids from estrone and cholestanone through organolithium intermediates)
- IT 1251-59-8P 290294-90-5P 290294-91-6P 290294-92-7P 290294-94-9P
290294-95-0P 290294-96-1P 290294-97-2P 290294-98-3P 352196-21-5P
352196-22-6P 352196-23-7P 352196-24-8P 352196-25-9P 352196-26-0P
352196-27-1P 352196-28-2P 352196-30-6P 352196-31-7P 352196-32-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of functionalized enantiopure steroids from estrone and cholestanone through organolithium intermediates)

L3 ANSWER 23 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:762481 CAPLUS
DOCUMENT NUMBER: 134:42498
TITLE: Synthesis of sugar-containing amphiphiles
for liquid and supercritical carbon dioxide
AUTHOR(S): Ye, Weijun; DeSimone, Joseph M.
CORPORATE SOURCE: Department of Chemistry, University of North Carolina
at Chapel Hill, Chapel Hill, NC, 27599-3290, USA
SOURCE: Industrial & Engineering Chemistry Research (2000), 39(12), 4564-4566
CODEN: IECRED; ISSN: 0888-5885
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Synthesis of sugar-containing amphiphiles for liquid and

supercritical carbon dioxide

SO Industrial & Engineering Chemistry Research (2000), 39(12),
4564-4566
CODEN: IECRED; ISSN: 0888-5885

AB Liquid and/or supercrit. carbon dioxide as a useful
processing fluid is limited by its inability to solubilize highly polar
compds. This problem can be alleviated. . . primary objective herein
is to design and synthesize novel materials that have both strong polar
moieties and highly CO₂-philic segments. Sugar-containing
hydrophobic/hydrophilic fluorinated methacrylate copolymers were
synthesized by free-radical polymerization for this purpose. The degree of
solubility
of the amphiphiles in CO₂ was found to be heavily influenced by the
amphiphilic structure, including the polarity of the sugar head
(acetal protected and deprotected), and the fraction of CO₂-philic groups.
We also found that the presence of water in. . .

ST acrylic fluoropolymer sugar deriv prepn; polymethacrylate
dispersant supercrit carbon dioxide polymn;
hydroxyethyl methacrylate dispersion polymn carbon
dioxide

IT Polymerization
(dispersion; of hydroxyethyl methacrylate in carbon
dioxide)

IT Polymer morphology
(of submicron particles prepared by dispersion polymerization in carbon
dioxide)

IT Microparticles
(preparation by dispersion polymerization in carbon dioxide)

IT Fluoropolymers, preparation
RL: SPN (Synthetic preparation); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(preparation of sugar-containing amphiphiles for liquid and supercrit.
carbon dioxide)

IT 25249-16-5P, 2-Hydroxyethyl methacrylate homopolymer
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of submicron particles by dispersion polymerization in carbon
dioxide)

IT 124-38-9, Carbon dioxide, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(preparation of sugar-containing amphiphiles for liquid and supercrit.)

IT 313228-57-8P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); TEM
(Technical or engineered material use); PREP (Preparation); RACT
(Reactant or reagent); USES (Uses)
(preparation of sugar-containing amphiphiles for liquid and supercrit.
carbon dioxide)

IT 313228-57-8DP, hydrolyzed
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)
(preparation of sugar-containing amphiphiles for liquid and supercrit.
carbon dioxide)

L3 ANSWER 24 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:35232 CAPLUS
DOCUMENT NUMBER: 132:51377
TITLE: Preparation of xylose by using equipment of
sugar factory

INVENTOR(S): Yu, Shijin
 PATENT ASSIGNEE(S): Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 4 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1152616	A	19970625	CN 1995-121301	19951219 <--
CN 1054883	B	20000726		

PRIORITY APPLN. INFO.: CN 1995-121301 19951219

TI Preparation of xylose by using equipment of sugar factory

PI CN 1152616 A 19970625

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1152616	A	19970625	CN 1995-121301	19951219 <--
CN 1054883	B	20000726		

AB The process comprises neutralizing hydrolyzed solution with active CaCO₃ emulsion and lime-kiln gas (carbon dioxide) to pH 3.0, heating to 80°, adding lime water to pH 9.0 while being saturated with lime-kiln gas, filtering, fuming. . .

ST xylose purifn prepn sugar factory

IT Anion exchangers
 Cation exchangers

(preparation of xylose by using equipment of sugar factory)

IT Lime (chemical)

RL: NUU (Other use, unclassified); USES (Uses)

(preparation of xylose by using equipment of sugar factory)

IT 58-86-6P, Xylose, preparation

RL: IMF (Industrial manufacture); PUR (Purification or recovery);

PREP (Preparation)

(preparation of xylose by using equipment of sugar factory)

IT 124-38-9, Carbon dioxide, uses 471-34-1, Calcium carbonate (CaCO₃), uses 7446-09-5, Sulfur dioxide, uses

RL: NUU (Other use, unclassified); USES (Uses)

(preparation of xylose by using equipment of sugar factory)

IT 114540-44-2, D 296 133405-09-1, 001x7

RL: TEM (Technical or engineered material use); USES (Uses)

(preparation of xylose by using equipment of sugar factory)

L3 ANSWER 25 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:172642 CAPLUS

DOCUMENT NUMBER: 130:211007

TITLE: Method of preparing crystalline L-arabinose by extraction of sugar beet pulp

INVENTOR(S): Antila, Juhani; Ravanko, Vili; Walliander, Pertti

PATENT ASSIGNEE(S): Cultor Corporation, Finland

SOURCE: PCT Int. Appl., 13 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9910542	A1	19990304	WO 1998-FI667	19980826 <--	
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW					
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
FI 9703501	A	19990227	FI 1997-3501	19970826 <--	
FI 105691	B1	20000929			
FI 9800119	A	19990227	FI 1998-119	19980120 <--	
FI 104500	B1	20000215			
CA 2301220	A1	19990304	CA 1998-2301220	19980826 <--	
AU 9889815	A	19990316	AU 1998-89815	19980826 <--	
EP 1012349	A1	20000628	EP 1998-941444	19980826 <--	
EP 1012349	B1	20040630			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
JP 2001514018	T	20010911	JP 2000-507847	19980826 <--	
AT 270346	T	20040715	AT 1998-941444	19980826	
ES 2223136	T3	20050216	ES 1998-941444	19980826	
US 6506897	B1	20030114	US 2000-486437	20001030 <--	
PRIORITY APPLN. INFO.:			FI 1997-3501	A 19970826	
			FI 1998-119	A 19980120	
			WO 1998-FI667	W 19980826	
REFERENCE COUNT: 2		THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT			
TI	Method of preparing crystalline L-arabinose by extraction of <u>sugar</u> beet pulp				
PI	WO 9910542 A1 19990304				
	PATENT NO.	KIND	DATE	APPLICATION NO. DATE	
PI	WO 9910542	A1	19990304	WO 1998-FI667	19980826 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW					
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	FI 9703501	A	19990227	FI 1997-3501	19970826 <--
	FI 105691	B1	20000929		
	FI 9800119	A	19990227	FI 1998-119	19980120 <--
	FI 104500	B1	20000215		
	CA 2301220	A1	19990304	CA 1998-2301220	19980826 <--
	AU 9889815	A	19990316	AU 1998-89815	19980826 <--
	EP 1012349	A1	20000628	EP 1998-941444	19980826 <--
	EP 1012349	B1	20040630		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
	JP 2001514018	T	20010911	JP 2000-507847	19980826 <--
	AT 270346	T	20040715	AT 1998-941444	19980826
	ES 2223136	T3	20050216	ES 1998-941444	19980826

US 6506897 B1 20030114 US 2000-486437 20001030 <--

AB The method comprises extraction of sugar beet pulp, from which sugar has been extracted, in a strong alkaline solution; hydrolysis of the obtained crude araban with a strong acid at an elevated temperature; neutralization and filtration of the obtained solution; . . .

ST arabinose purifn cation anion exchanger; hydrolysis araban arabinose prepn

IT Anion exchangers
Cation exchangers
Extraction

Hydrolysis
(preparation of crystalline L-arabinose by extraction of sugar beet pulp)

IT Sugar beet
(pulp; preparation of crystalline L-arabinose by extraction of sugar beet pulp)

IT 124-38-9, Carbon dioxide, reactions 7664-93-9,
Sulfuric acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(for neutralization; preparation of crystalline L-arabinose by extraction of sugar beet pulp)

IT 5328-37-0P, L-Arabinose
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(preparation of crystalline L-arabinose by extraction of sugar beet pulp)

IT 9060-75-7P, L-Arabinan
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of crystalline L-arabinose by extraction of sugar beet pulp)

IT 1305-62-0, Calcium hydroxide, uses
RL: NUU (Other use, unclassified); USES (Uses)
(suspension; preparation of crystalline L-arabinose by extraction of sugar beet pulp)

L3 ANSWER 26 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:150338 CAPLUS

DOCUMENT NUMBER: 130:297016

TITLE: New synthetic approaches to aminosugar-containing polymers

AUTHOR(S): Kadokawa, Jun-Ichi; Tagaya, Hideyuki; Chiba, Koji

CORPORATE SOURCE: Department of Materials Science and Engineering,
Faculty of Engineering, Yamagata University, Yamagata,
992, Japan

SOURCE: Recent Research Developments in Macromolecules
Research (1998), 3(Pt. 1), 67-75
CODEN: RRMRFG

PUBLISHER: Research Signpost

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SO Recent Research Developments in Macromolecules Research (1998),
3(Pt. 1), 67-75
CODEN: RRMRFG

AB . . . chain. The second topic concerns synthesis and block copolymn. of hydroxy-terminated oligochitin. Hydroxy-terminated oligochitin was prepared by a selective acid hydrolysis of fully protected chitin. Furthermore, block copolymn. of the product oligochitin with the other

hydroxy-terminated oligomers using a diisocyanate compound. . .

ST review amino deriv sugar polyester polyurethane prepn; hydroxy terminated oligochitin block polymn review

IT Polymerization
(polymerization of glucosamine derivs. with carbon dioxide and by regioselective polycondensation)

IT Polyamides, preparation
Polyureas
Polyurethanes, preparation
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(polymerization of glucosamine derivs. with carbon dioxide and by regioselective polycondensation)

IT 1398-61-4DP, Chitin, hydroxy derivs., polymers
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(oligomeric; polymerization of glucosamine derivs. and of hydroxy-terminated oligochitin)

IT 3416-24-8DP, D-Glucosamine, derivs., polymers
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(polymerization of glucosamine derivs. with carbon dioxide and by regioselective polycondensation)

L3 ANSWER 27 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:90426 CAPLUS

DOCUMENT NUMBER: 130:140746

TITLE: Derivatized polysaccharides and preparation thereof in a densified fluid

INVENTOR(S): Harris, Rosemarie; Jureller, Sharon H.; Kerschner, Judith L.; Trzasko, Peter T.; Humphreys, Robert W. R.

PATENT ASSIGNEE(S): National Starch and Chemical Investment Holding Corporation, USA

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
EP 893451	A2	19990127	EP 1998-113012	19980713 <--
EP 893451	A3	19990331		
EP 893451	B1	20050302		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 5977348	A	19991102	US 1997-900753	19970725 <--
AU 9876133	A	19990204	AU 1998-76133	19980713 <--
AU 742783	B2	20020110		
ES 2239371	T3	20050916	ES 1998-113012	19980713
CA 2243203	A1	19990125	CA 1998-2243203	19980714 <--
JP 11092501	A	19990406	JP 1998-209341	19980724 <--
PRIORITY APPLN. INFO.:			US 1997-900753	A 19970725

OTHER SOURCE(S): MARPAT 130:140746

TI Derivatized polysaccharides and preparation thereof in a densified fluid

PI	EP 893451 A2	<u>19990127</u>			
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 893451	A2	19990127	EP 1998-113012	19980713 <--
	EP 893451	A3	19990331		
	EP 893451	B1	20050302		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 5977348	A	19991102	US 1997-900753	19970725 <--
	AU 9876133	A	19990204	AU 1998-76133	19980713 <--
	AU 742783	B2	20020110		
	ES 2239371	T3	20050916	ES 1998-113012	19980713
	CA 2243203	A1	19990125	CA 1998-2243203	19980714 <--
	JP 11092501	A	19990406	JP 1998-209341	19980724 <--
AB	<p><u>Polysaccharides</u> are chemical modified, especially esterified or etherified, in a densified fluid, especially in supercrit. <u>carbon dioxide</u>. The process allows for a high degree of substitution without the use of organic solvents or repeated reactions, and unreacted reagents and byproducts are separated easily since the <u>polysaccharide</u> is insol. in the densified fluid. Thus, Hylon VII starch (GPC mol. weight 1.2 million) was esterified with acetic anhydride in densified <u>carbon dioxide</u> using sodium acetate catalyst at 115° and 4000 psi for 2.5 h, giving 2.47% substitution and mol. weight 2,444,000.</p>				
ST	<p><u>polysaccharide</u> modification densified <u>carbon dioxide</u>; starch hydroxypropyl ether acetate prepn; acetic anhydride esterification starch; sodium acetate esterification catalyst starch</p>				
IT	<p>Bronsted acids Hydroxides (inorganic) Lewis acids Lewis bases RL: CAT (Catalyst use); USES (Uses) (catalysts; derivatized <u>polysaccharides</u> and preparation thereof in a densified fluid)</p>				
IT	<p>Esterification catalysts (derivatized <u>polysaccharides</u> and preparation thereof in a densified fluid)</p>				
IT	<p><u>Polysaccharides</u>, processes RL: PEP (Physical, engineering or chemical process); PROC (Process) (derivatized <u>polysaccharides</u> and preparation thereof in a densified fluid)</p>				
IT	<p>Carboxylic acids, uses RL: CAT (Catalyst use); USES (Uses) (salts, catalysts; derivatized <u>polysaccharides</u> and preparation thereof in a densified fluid)</p>				
IT	<p>Amines, uses RL: CAT (Catalyst use); USES (Uses) (tertiary, catalysts; derivatized <u>polysaccharides</u> and preparation thereof in a densified fluid)</p>				
IT	<p>9045-28-7P, Starch acetate 39433-68-6P, Starch propionate 54386-22-0P, 2-Hydroxypropyl starch acetate 62931-09-3P, Guar gum acetate 100842-94-2P, Maltodextrin acetate 220039-92-9P, 2-Hydroxypropyl starch octenylsuccinate 220039-94-1P, 2-Hydroxypropyl starch octanoate 220039-96-3P, 2-Hydroxypropyl starch trifluoroacetate RL: IMF (Industrial manufacture); <u>PREP (Preparation)</u> (derivatized <u>polysaccharides</u> and preparation thereof in a</p>				

- densified fluid)
- IT 104-15-4, uses
 RL: CAT (Catalyst use); USES (Uses)
 (esterification and hydrolysis catalyst; derivatized
polysaccharides and preparation thereof in a densified fluid)
- IT 121-44-8, uses 121-69-7, N,N-Dimethylaniline, uses 127-08-2, Potassium
 acetate 127-09-3 926-64-7, Dimethylaminoacetonitrile 1122-58-3,
 4-(Dimethylamino)pyridine 1310-65-2, Lithium hydroxide 1310-73-2,
 Sodium hydroxide, uses 2923-18-4, Sodium trifluoroacetate 5683-33-0,
 2-(Dimethylamino)pyridine 19437-26-4, Di-2-pyridylketone 43018-61-7,
 5-Dimethylamino-2-pentanone 220035-23-4
 RL: CAT (Catalyst use); USES (Uses)
 (esterification catalyst; derivatized polysaccharides and
 preparation thereof in a densified fluid)
- IT 124-38-9, Carbon dioxide, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (supercrit.; derivatized polysaccharides and preparation thereof
 in a densified fluid)

L3 ANSWER 28 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:781775 CAPLUS

DOCUMENT NUMBER: 130:54741

TITLE: Process, cost modeling and simulations for integrated
 project development of biomass for fuel and protein

AUTHOR(S): Selvam, P. V. Pannir; Wolff, D. M. B.; Melo, H. N.
 Souza

CORPORATE SOURCE: Programa de Pos-Graduacao em Engenharia Quimica Centro
 de Tecnologia, Universidade Federal do Rio Grande do
 Norte, Natal, Brazil

SOURCE: Journal of Scientific & Industrial Research (
1998), 57(10 & 11), 567-574
 CODEN: JSIRAC; ISSN: 0022-4456

PUBLISHER: National Institute of Science Communication, CSIR

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SO Journal of Scientific & Industrial Research (1998), 57(10 & 11),
 567-574

CODEN: JSIRAC; ISSN: 0022-4456

AB . . . The preliminary anal. of cost and investments of biomass
 utilization projects which are included for this study are: steam,
 ammonia, carbon dioxide and alkali pretreatment
 process, methane gas production using anaerobic digestion process, aerobic
 composting, ethanol fermentation and distillation, effluent treatments using.

cogeneration of energy for drying. The main project under developments
 are the biomass valuation projects with the elephant (Napier) grass,
sugar cane bagasse and microalgae, using models for mass balance,
 equipment and production cost. The sensibility analyses are carried out to.

ST fuel protein biomass project development; biomass hydrolysis
 fermn alc protein; ethanol protein biomass hydrolysis fermn

IT Hydrolysis
 (autohydrolysis; process, economics and simulation for integrated
 project development of biomass for fuel and protein)

IT Hydrolysis

(base; process, economics and simulation for integrated project development of biomass for fuel and protein)

IT Hydrolysis

(enzymic; process, economics and simulation for integrated project development of biomass for fuel and protein)

IT Proteins, general, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(process, economics and simulation for integrated project development of biomass for fuel and protein)

IT 64-17-5P, Ethanol, preparation 74-82-8P, Methane, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(process, economics and simulation for integrated project development of biomass for fuel and protein)

IT 124-38-9, Carbon dioxide, uses 7664-41-7, Ammonia, uses

RL: NUU (Other use, unclassified); USES (Uses)

(process, economics and simulation for integrated project development of biomass for fuel and protein)

L3 ANSWER 29 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:686627 CAPLUS

DOCUMENT NUMBER: 129:342742

TITLE: Pretreatment for cellulose hydrolysis by carbon dioxide explosion

AUTHOR(S): Zheng, Yizhou; Lin, H.-M.; Tsao, George T.

CORPORATE SOURCE: Laboratory of Renewable Resources Engineering, Purdue University, West Lafayette, IN, 47906, USA

SOURCE: Biotechnology Progress (1998), 14(6), 890-896

CODEN: BIPRET; ISSN: 8756-7938

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Pretreatment for cellulose hydrolysis by carbon dioxide explosion

SO Biotechnology Progress (1998), 14(6), 890-896

CODEN: BIPRET; ISSN: 8756-7938

AB Cellulosic materials were treated with supercrit. carbon dioxide to increase the reactivity of cellulose, thereby to enhance the rate and the extent of cellulose hydrolysis. In this pretreatment process, the cellulosic materials such as Avicel, recycled paper mix, sugarcane bagasse and the repulping waste of recycled paper are placed in a reactor under pressurized carbon dioxide at 35°C for a controlled time period. Upon an explosive release of the carbon dioxide pressure, the disruption of the cellulosic structure increases the accessible surface area of the cellulosic substrate to enzymic hydrolysis. Results indicate that supercrit. carbon dioxide is effective for pretreatment of cellulose. An increase in pressure facilitates the faster penetration of carbon dioxide mols. into the crystalline structures, thus more glucose is produced from cellulosic materials after the explosion as compared to those without the pretreatment. This explosion pretreatment enhances the rate of cellulosic material hydrolysis as well as increases glucose yield by as much as 50%. Results from the simultaneous saccharification and fermentation tests also.

. in the available carbon source from the cellulosic materials for fermentation to produce ethanol. As an alternative method, this supercrit. carbon dioxide explosion has a possibility to reduce expense compared with ammonia explosion, and since it is operated at the low temperature, it will not cause degradation of sugars such as those treated with steam explosion due to the high-temperature involved.

ST cellulose hydrolysis supercrit carbon dioxide explosion

IT Solid wastes

(cellulosic; pretreatment for Cellulose Hydrolysis by Carbon Dioxide Explosion)

IT Saccharification

(enzymic; pretreatment for Cellulose Hydrolysis by Carbon Dioxide Explosion)

IT Bagasse

(pretreatment for Cellulose Hydrolysis by Carbon Dioxide Explosion)

IT Paper

(recycled; pretreatment for Cellulose Hydrolysis by Carbon Dioxide Explosion)

IT 64-17-5P, Ethanol, preparation

RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)

(fermentation; pretreatment for Cellulose Hydrolysis by Carbon Dioxide Explosion)

IT 9004-34-6, Avicel, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(pretreatment for Cellulose Hydrolysis by Carbon Dioxide Explosion)

IT 124-38-9, Carbon dioxide, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(pretreatment for Cellulose Hydrolysis by Carbon Dioxide Explosion)

L3 ANSWER 30 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:338926 CAPLUS

DOCUMENT NUMBER: 129:6472

TITLE: Effects of PCO₂ on substrate compositions in anaerobic digestion

AUTHOR(S): Kim, Young-Chur; Lee, Mu-kang

CORPORATE SOURCE: Dep. Environ. Eng., Kyung-Sung Univ., S. Korea

SOURCE: Hwahak Konghak (1998), 36(1), 78-84

CODEN: HHKHAT; ISSN: 0304-128X

PUBLISHER: Korean Institute of Chemical Engineers

DOCUMENT TYPE: Journal

LANGUAGE: Korean

SO Hwahak Konghak (1998), 36(1), 78-84

CODEN: HHKHAT; ISSN: 0304-128X

AB Effects of carbon dioxide partial pressure (PCO₂) and

substrate compns. on the bacterial population, methane production rate and matter degradation in anaerobic digestion were. . . by using anaerobic chemostat type reactors at 35±1°, at the HRT of 7 days. Two

kinds of single substrate containing carbohydrate and protein, and mixture of these were used in this study. At PCO₂, of 0.5 atm, the specific

methane production. . . rates at the protein substrate reactor. At PCO₂ of 0.5 atm, the methane production rates in the reactors fed by carbohydrate, protein and mixed substrate were 20%, 29% and 26% higher than those obtained under the controlled condition, resp. The number. . . increased as PCO₂ increased from 0.1 to 0.6 atm, however, decreased slightly at PCO₂ above 0.7 atmospheric. The number of hydrolytic bacteria, sulfate-reducing bacteria and H₂-producing acetogenic bacteria were not much increased significantly when PCO₂ exceeded 0.7 atmospheric. It was considered. . .

ST biogas prodn anaerobic digestion substrate compn; carbon dioxide effect methane anaerobic digestion

IT Carbohydrates, biological studies
 Proteins, general, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (effects of CO₂ partial pressure on substrate compns. in anaerobic digestion)

IT 74-82-8P, Methane, preparation
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
 (effects of CO₂ partial pressure on substrate compns. in anaerobic digestion)

IT 124-38-9, Carbon dioxide, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (effects of CO₂ partial pressure on substrate compns. in anaerobic digestion)

L3 ANSWER 31 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1998:163169 CAPLUS
 DOCUMENT NUMBER: 128:242954
 TITLE: Fermentation of galacturonic acid and pectin-rich materials to ethanol by genetically modified strains of Erwinia
 AUTHOR(S): Grohmann, Karel; Manthey, John A.; Cameron, Randall G.; Buslig, Bela S.
 CORPORATE SOURCE: USDA, ARS, SAA, Citrus and Subtropical Products Research Laboratory, Winter Haven, FL, 33883-1909, USA
 SOURCE: Biotechnology Letters (1998), 20(2), 195-200
 CODEN: BILED3; ISSN: 0141-5492
 PUBLISHER: Chapman & Hall
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SO Biotechnology Letters (1998), 20(2), 195-200
 CODEN: BILED3; ISSN: 0141-5492

AB . . . genus Erwinia indicates that two strains, E. chrysanthemi EC16 and E. carotovora SR38, show promise for the development of direct hydrolysis and fermentation of pectin-rich substrates to mixts. of ethanol and acetate. Both strains fermented glucose to ethanol in nearly theor.. . . yields, but produced mainly acetate and ethanol by fermentation of D-galacturonic acid. Both strains depolymd. citrus pectin, polygalacturonic acid and polysaccharides in citrus peel and converted the resulting sugars to carbon dioxide, acetate, ethanol and lesser amts. of formate and succinate.

IT Polysaccharides, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (fermentation of polysaccharides of Citrus to ethanol by genetically modified Erwinia)

IT 64-17-5P, Ethanol, preparation
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
 (fermentation; fermentation of polygalacturonic acid and pectin-rich materials to ethanol by genetically modified Erwinia)

IT 64-17-5P, Ethanol, preparation
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
 (fermentation of polygalacturonic acid and pectin-rich materials to ethanol by genetically modified Erwinia)

L3 ANSWER 32 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1998:84757 CAPLUS
 DOCUMENT NUMBER: 128:117234
 TITLE: Catalytic steam reforming of biomass-derived fractions from pyrolysis processes
 AUTHOR(S): Czernik, S.; Wang, D.; Montane, D.; Chornet, E.
 CORPORATE SOURCE: National Renewable Energy Laboratory, Golden, CO, USA
 SOURCE: Developments in Thermochemical Biomass Conversion (1997), Volume 1, 672-686. Editor(s): Bridgwater, A. V.; Boocock, Dave G. B. Blackie: London, UK.
 CODEN: 65OTAY
 DOCUMENT TYPE: Conference
 LANGUAGE: English
 REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SO Developments in Thermochemical Biomass Conversion (1997), Volume 1, 672-686. Editor(s): Bridgwater, A. V.; Boocock, Dave G. B. Publisher: Blackie, London, UK.
 CODEN: 65OTAY

AB Biomass conversion via hydrolytic, solvolytic, and pyrolytic processes generates liquid streams that, after separation of marketable products,
 can be used to produce either syngas. . . where thermal cracking competes with catalytic processes. Bench-scale, fixed bed reactor tests demonstrated high hydrogen yields from model compds. and carbohydrate-derived pyrolysis oil fractions. Reforming bio-oil or its fractions required proper dispersion of the liquid to avoid vapor-phase carbonization of the. . . assessment showed that the process could be economically viable if the lignin-derived oil fraction was sold for adhesives and only carbohydrate-derived fraction was converted to hydrogen.

IT 74-82-8P, Methane, preparation 124-38-9P, Carbon dioxide, preparation 630-08-0P, Carbon monoxide, preparation 1333-74-0P, Hydrogen, preparation
 RL: PNU (Preparation, unclassified); PREP (Preparation)
 (catalytic steam reforming of poplar pyrolysis oil and its fractions)

IT 91-10-1P, Syringol
 RL: PNU (Preparation, unclassified); PREP (Preparation)
 (model compound; catalytic steam reforming of poplar pyrolysis oil and its fractions)

L3 ANSWER 33 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:38402 CAPLUS
DOCUMENT NUMBER: 128:127145
TITLE: Enzyme catalyzed method for producing monocarboxylic acid esters of mono-, di-, or oligosaccharides
INVENTOR(S): Schneider, Manfred; Haase, Bernhard; Machmueller, Guido
PATENT ASSIGNEE(S): Huels A.-G., Germany
SOURCE: Ger. Offen., 4 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
	DE 19626943	A1	19980108	DE 1996-19626943	19960704 <--
PRIORITY APPLN. INFO.:				DE 1996-19626943	19960704
PI	DE 19626943 A1	<u>19980108</u>			
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	DE 19626943	A1	19980108	DE 1996-19626943	19960704 <--
AB	. . . and rape oil alkyl esters are incubated with lipase in the presence of mono-, di- or oligosaccharides, starch, cellulose, methylcellulose <u>hydrolyzates</u> , cyclodextrin, <u>sugar</u> alcs., and/or glycosides, especially glycoside antibiotics to prepare the monoesters. Glucose, lauric acid Me ester, and Novozyme SP 435 in. . .				
IT	50-69-1, Ribose 50-70-4, Sorbitol, reactions 50-99-7, Glucose, reactions 57-48-7, Fructose, reactions 57-50-1, reactions 57-92-1, Streptomycin, reactions 59-23-4, Galactose, reactions 63-42-3, Lactose 69-65-8, Mannitol 69-79-4, Maltose 111-82-0, Lauric acid methyl ester 147-81-9, Arabinose 528-50-7, Cellobiose 818-44-0, Caprylic acid vinyl ester 3458-28-4, Mannose 9004-34-6, Cellulose, reactions 9004-67-5D, Methylcellulose, <u>hydrolyzates</u> 9005-25-8, Starch, reactions 12619-70-4, Cyclodextrin				
	RL: RCT (Reactant); RACT (Reactant or reagent) (enzyme catalyzed method for producing monocarboxylic acid esters of mono-, di-, or oligosaccharides)				
IT	77607-15-9P, 6-O-Lauroylglucose 143823-61-4P				
	RL: SPN (Synthetic preparation); <u>PREP (Preparation)</u> (enzyme catalyzed method for producing monocarboxylic acid esters of mono-, di-, or oligosaccharides)				
IT	124-38-9, <u>Carbon dioxide</u> , uses				
	RL: NUU (Other use, unclassified); USES (Uses) (supercrit., solvent; enzyme catalyzed method for producing monocarboxylic acid esters of mono-, di-, or oligosaccharides)				

L3 ANSWER 34 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:120965 CAPLUS
DOCUMENT NUMBER: 126:304952
TITLE: Solid-state fermentation of wheat bran by Trichoderma reesei QM9414. Substrate composition changes, C balance, enzyme production, growth, and kinetics
AUTHOR(S): Smits, J. P.; Rinzema, A.; Tramper, J.; Van Sonsbeek, H. M.; Knol, W.
CORPORATE SOURCE: Division Agrotechnol. Microbiology, TNO Nutrition Food

SOURCE: Research Inst., Zeist, 3700 AJ, Neth.
Applied Microbiology and Biotechnology (1996
) , 46(5/6), 489-496
CODEN: AMBIDG; ISSN: 0175-7598

PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English

SO Applied Microbiology and Biotechnology (1996), 46(5/6), 489-496
CODEN: AMBIDG; ISSN: 0175-7598

AB . . . decline. The activities of xylanase and protease are linearly
related to the glucosamine level. No clear correlations between
glucosamine and carboxymethyl-cellulose-hydrolyzing enzyme
activity and amylase activity were found.

ST fermn wheat bran Trichoderma glucosamine oxygen; carbon
dioxide fermn wheat bran Trichoderma

IT Carbohydrates, biological studies
Mineral elements, biological studies
Proteins, general, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
BIOL (Biological study); OCCU (Occurrence)
(wheat bran solid-state fermentation by Trichoderma reesei, substrates, C
balance, enzymes, growth, and kinetics)

IT 124-38-9P, Carbon dioxide, biological studies
3416-24-8P, Glucosamine
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU
(Biological study, unclassified); BIOL (Biological study); OCCU
(Occurrence); PREP (Preparation)
(wheat bran solid-state fermentation by Trichoderma reesei, substrates, C
balance, enzymes, growth, and kinetics)

L3 ANSWER 35 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:126626 CAPLUS
DOCUMENT NUMBER: 124:170022
TITLE: Immobilization of biologically active materials and
diagnostic agents in cross-linked
poly(organophosphazenes)

INVENTOR(S): Allcock, Harry R.; Pucher, Shawn R.; Visscher, Karyn
B.

PATENT ASSIGNEE(S): Penn State Research Foundation, USA

SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9532736	A1	19951207	WO 1995-US6854	19950531 <--
W: AU, CA, JP, KR, NO				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9526581	A	19951221	AU 1995-26581	19950531 <--
PRIORITY APPLN. INFO.:			US 1994-251510	A 19940531
			WO 1995-US6854	W 19950531
PI WO 9532736 A1 <u>19951207</u>				
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 9532736 A1 19951207 WO 1995-US6854 19950531 <--
W: AU, CA, JP, KR, NO
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AU 9526581 A 19951221 AU 1995-26581 19950531 <--

AB . . . at least (1) a substituent group that can be radiation
crosslinked and (2) a substituent group that is susceptible to
hydrolysis under the conditions of use, to impart biodegradability
to the polymer, in combination with a substance to be delivered, e.g., .

IT Carbohydrates and Sugars, biological studies
RL: BUU (Biological use, unclassified); PEP (Physical, engineering or
chemical process); THU (Therapeutic use); BIOL (Biological study); PROC
(Process); USES (Uses)
(immobilization of bioactive materials and diagnostic agents in
crosslinked poly(organophosphazenes))

IT Polysaccharides, biological studies
RL: BUU (Biological use, unclassified); PEP (Physical, engineering or
chemical process); THU (Therapeutic use); BIOL (Biological study); PROC
(Process); USES (Uses)
(immobilization of bioactive materials and diagnostic agents in
crosslinked poly(organophosphazenes))

IT Phosphazene polymers
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); SPN
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);
PREP (Preparation); USES (Uses)
(organo-, immobilization of bioactive materials and diagnostic agents
in crosslinked poly(organophosphazenes))

IT 9002-13-5DP, Urease, immobilized
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST
(Analytical study); PREP (Preparation); USES (Uses)
(immobilization of bioactive materials and diagnostic agents in
crosslinked poly(organophosphazenes))

IT 98973-15-0P
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); SPN
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);
PREP (Preparation); USES (Uses)
(immobilization of bioactive materials and diagnostic agents in
crosslinked poly(organophosphazenes))

IT 74-82-8, Methane, biological studies 117-96-4 124-38-9, Carbon
dioxide, biological studies 2276-90-6 7440-01-9, Neon,
biological studies 7440-37-1, Argon, biological studies 7440-39-3,
Barium, biological studies 7440-54-2D, Gadolinium, chelates 7440-59-7,
Helium, biological studies 7727-37-9, Nitrogen, biological studies
7782-44-7, Oxygen, biological studies 9001-12-1, Collagenase
9001-45-0, Glucuronidase 9001-92-7, Protease 9001-99-4, RNase
9003-98-9, DNase 9003-99-0, Peroxidase 9012-90-2, DNA polymerase
9013-05-2, Phosphatase 9013-19-8, Isomerase 9013-79-0, Esterase
9013-93-8, Phospholipase 9015-85-4, DNA ligase 9025-82-5,
Phosphodiesterase 9026-81-7, Nuclease 9027-22-9, Decarboxylase
9031-44-1, Kinase 9031-56-5, Ligase 9033-06-1, Glucosidase
9035-74-9, Phosphorylase 9035-82-9, Dehydrogenase 9046-59-7,
Hydroxylase 9047-61-4, Transferase 9055-04-3, Lyase 9055-15-6,
Oxidoreductase 10102-44-0, Nitrogen dioxide, biological studies
59017-64-0, Ioxaglic acid 60166-93-0, Iopamidol 66108-95-0, Iohexol
79770-24-4, Iotrol 87771-40-2, Ioversol 92339-11-2, Iodixanol
RL: BUU (Biological use, unclassified); PEP (Physical, engineering or
chemical process); THU (Therapeutic use); BIOL (Biological study); PROC

(Process); USES (Uses)

(immobilization of bioactive materials and diagnostic agents in crosslinked poly(organophosphazenes))

IT 26085-02-9P, Poly(dichlorophosphazene)

RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(immobilization of bioactive materials and diagnostic agents in crosslinked poly(organophosphazenes))

L3 ANSWER 36 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:167079 CAPLUS

DOCUMENT NUMBER: 120:167079

TITLE: Characteristics of products of oxygen-alcohol pulping

AUTHOR(S): Deineko, I. P.; Makarova, O. V.; Pranovich, A. V.

CORPORATE SOURCE: St. Petersburg. Lesotekh. Akad., St. Petersburg, Russia

SOURCE: Koksnes Kimija (1993), (1-3), 45-50

CODEN: KHDRDQ; ISSN: 0201-7474

DOCUMENT TYPE: Journal

LANGUAGE: Russian

SO Koksnes Kimija (1993), (1-3), 45-50

CODEN: KHDRDQ; ISSN: 0201-7474

AB . . . aromatic rings and rupture of the α - β -carbon-carbon bonds in the propane chains of the lignin monomer unit. Partial dissoln. of polysaccharides (25-35%) during pulping was related to hydrolytic destruction of the polysaccharide chains.

IT 50-00-0P, Formaldehyde, preparation 64-18-6P, Formic acid, preparation 64-19-7P, Acetic acid, preparation 79-14-1P, Glycolic acid, preparation 110-15-6P, Succinic acid, preparation 110-94-1P, Glutaric acid 121-33-5P, Vanillin 121-34-6P, Vanillic acid 124-38-9P, Carbon dioxide, preparation 144-62-7P, Oxalic acid, preparation 473-81-4P, Glyceric acid 498-21-5P, Pyrotartaric acid 505-70-4P, Muconic acid 630-08-0P, Carbon monoxide, preparation RL: FORM (Formation, nonpreparative); PREP (Preparation)

(formation of, in ethanol-oxygen pulping of sprucewood)

IT 9004-34-6P

RL: PREP (Preparation)

(pulp, ethanol-oxygen, preparation of, from sprucewood, degradation products in)

L3 ANSWER 37 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:109834 CAPLUS

DOCUMENT NUMBER: 120:109834

TITLE: Purification of crude sugar liquor from agricultural residues

INVENTOR(S): Watano, Shigeru; Tsutsumi, Taira; Kano, Sadao; Ishizaki, Kenji; Tokuda, Masatsugu; Sasaki, Hiroaki; Shiba, Hirotaka; Matsumoto, Shinya

PATENT ASSIGNEE(S): Hokkaido Sugar Co, Japan; Suntory Ltd

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

JP 05253000	A	19931005	JP 1992-84976	19920309 <--
PRIORITY APPLN. INFO.:			JP 1992-84976	19920309

TI Purification of crude sugar liquor from agricultural residues

PI JP 05253000 A 19931005 Heisei

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 05253000	A	19931005	JP 1992-84976	19920309 <--
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AB Crude sugar liquor obtained by alkali hydrolysis, pressure-cooker treatment and/or enzyme treatment of wood, corncob, bagasse, cotton-seed shell, straw, etc. is purified by using lime and an acid which can form insol. salt with lime for good filtration separation. Thus, an alkali-treated, xylanase-hydrolyzed corncob-derived sugar liquor was combined with a milk of lime at 43° to pH 11, flushed with CO2 gas, precipitate was removed, . . .

ST agriculture residue hydrolysis sugar purifn; corncob

hydrolysis sugar purifn; bagasse hydrolysis

sugar purifn; seed cotton hydrolysis sugar

purifn; wood residue hydrolysis sugar purifn; straw

hydrolysis sugar purifn

IT Carbohydrates and Sugars, preparation

Oligosaccharides

RL: PREP (Preparation)

(agricultural residue-based, refining of, with lime and acids as precipitation aids)

IT Lime (chemical)

RL: USES (Uses)

(in purin. of sugar from agricultural wastes)

IT Bagasse

Corn cob

Wood

(sugars from, purin. of, lime and acids for)

IT Waste solids

(agricultural, sugars from, purin. of, lime and acids for)

IT Straw

(rice, sugars from, purin. of, lime and acids for)

IT Rice

(straw, sugars from, purin. of, lime and acids for)

IT 124-38-9, Carbon dioxide, uses

RL: USES (Uses)

(in purin. of sugar from agricultural wastes)

L3 ANSWER 38 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:493671 CAPLUS

DOCUMENT NUMBER: 119:93671

TITLE: Effect of sugar consumption on ethanol fermentation in a tower fermentor packed with self-aggregating yeast: mathematical modeling and bed height prediction

AUTHOR(S): Chen, C. S.; Chan, E.; Gong, C. S.; Chen, L. F.

CORPORATE SOURCE: Dep. Food Sci., Purdue Univ., West Lafayette, IN, 47907, USA

SOURCE: Applied Biochemistry and Biotechnology (1993), 39-40, 491-508

CODEN: ABIBDL; ISSN: 0273-2289

DOCUMENT TYPE: Journal

LANGUAGE: English

TI Effect of sugar consumption on ethanol fermentation in a tower fermentor packed with self-aggregating yeast: mathematical modeling and bed height prediction

SO Applied Biochemistry and Biotechnology (1993), 39-40, 491-508

CODEN: ABIBDL; ISSN: 0273-2289

AB . . . Large aggregates (2-3 mm) were formed and packed in the column. The height of this packed region depends on the sugar concentration. As sugar concns. were reduced to below a critical value, most of the large aggregates disintegrated into smaller aggregates (0.1-0.2 mm). Above. . . small amount of large aggregates were fluidized and formed a well mixed region by the liquid medium and the produced carbon dioxide. A math. model of a plug flow with consideration of axial dispersion and a Continuous Stirred Tank reactor (CSTR) in series is proposed to describe such fermentor. The concentration profile of sugar can be simulated by this model. The height of the packed bed region can then be estimated based on the predetd. critical sugar concentration. Final ethanol concentration and the productivity of such fermentor can also be predicted.

IT Saccharomyces uvarum

(ethanol fermentation by, in tower fermentor, sugar consumption effect on)

IT Carbohydrates and Sugars, biological studies

RL: BIOL (Biological study)

(ethanol production from, by yeast in tower fermentor)

IT Fermentation

(ethanol, by yeast in tower fermentor, sugar consumption effect on)

IT Simulation and Modeling, biological

(of ethanol fermentation, in tower fermentor, sugar consumption in)

IT Syrups

(hydrolyzed starch, ethanol fermentation of, by yeast in tower fermentor)

IT Fermentation apparatus

(tower fermentor, ethanol fermentation by yeast in, sugar consumption effect on)

IT 64-17-5P, Ethanol, preparation

RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)

(manufacture of, by yeast in tower fermentor, sugar consumption effect on)

IT 9005-25-8

RL: BIOL (Biological study)

(syrups, hydrolyzed starch, ethanol fermentation of, by yeast in tower fermentor)

L3 ANSWER 39 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:636808 CAPLUS

DOCUMENT NUMBER: 117:236808

TITLE: Stable isotope fractionation of biomonomers during protokerogen formation

AUTHOR(S): Qian, Y.; Engel, M. H.; Macko, S. A.

CORPORATE SOURCE: Sch. Geol. Geophys., Univ. Oklahoma, Norman, OK, 73019, USA

SOURCE: Chemical Geology (1992), 101(3-4), 201-10

CODEN: CHGEAD; ISSN: 0009-2541

DOCUMENT TYPE: Journal

LANGUAGE: English

SO Chemical Geology (1992), 101(3-4), 201-10

CODEN: CHGEAD; ISSN: 0009-2541

AB . . . alanine and glucose were heated at 100° for up to 40 days to exam. the condensation of amino acids and sugars (e.g., the Maillard reaction) in relation to the diagenetic formation of humic materials in sediments. The $\delta^{13}\text{C}$ - and $\delta^{15}\text{N}$ -values of. . . 8.8.permill. and 2.7.permill., resp., relative to their initial compns. In contrast, the insol. melanoidin product and alanine recovered by acid hydrolysis of the melanoidin were both depleted in ^{13}C and ^{15}N relative to the starting materials. The magnitude of this isotopic. . .

IT Carbohydrates and Sugars, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(Maillard reaction of, with amino acids, kinetic stable isotope fractionation in, organic matter diagenesis and protokerogen formation in relation to)

IT Amino acids, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(Maillard reaction of, with sugars, kinetic stable isotope fractionation in, organic matter diagenesis and protokerogen formation in relation to)

IT Organic matter

(diagenesis of, Maillard condensation of amino acids with sugars in, kinetic stable isotope fractionation in)

IT Humus and Humic substances

RL: FORM (Formation, nonpreparative)

(formation of, by condensation of amino acids and sugars, kinetic stable isotope fractionation in)

IT Diagenesis

(of organic matter, Maillard condensation of amino acids with sugars in, kinetic stable isotope fractionation in)

IT Kerogens

RL: FORM (Formation, nonpreparative)

(proto-, formation of, kinetic stable isotope fractionation of Maillard condensation of amino acids with sugars in relation to)

IT 50-99-7P, Glucose, reactions

RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(Maillard reaction of, with alanine, kinetic stable isotope fractionation in, organic matter diagenesis and protokerogen formation in relation to)

IT 56-41-7P, Alanine, reactions

RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(Maillard reaction of, with glucose, kinetic stable isotope fractionation in, organic matter diagenesis and protokerogen formation in relation to)

IT 124-38-9P, Carbon dioxide, preparation

RL: FORM (Formation, nonpreparative); PREP (Preparation)

(formation of, in Maillard reaction of alanine and glucose, kinetic stable isotope fractionation in, organic matter diagenesis and protokerogen formation in relation to)

L3 ANSWER 40 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:126924 CAPLUS

DOCUMENT NUMBER: 116:126924

TITLE: Effect of pretreatment on simultaneous

saccharification and fermentation of hardwood into acetone/butanol

AUTHOR(S): Shah, M. M.; Song, S. K.; Lee, Y. Y.; Torget, Robert
 CORPORATE SOURCE: Dep. Chem. Eng., Auburn Univ., Auburn, AL, 36849, USA
 SOURCE: Applied Biochemistry and Biotechnology (1991), 28-29, 99-109
 CODEN: ABIBDL; ISSN: 0273-2289

DOCUMENT TYPE: Journal
 LANGUAGE: English

SO Applied Biochemistry and Biotechnology (1991), 28-29, 99-109
 CODEN: ABIBDL; ISSN: 0273-2289

AB . . . and fermentation (SSF), using Clostridium acetobutylicum. The main objectives of the pretreatment were to achieve efficient separation of lignin from carbohydrates, and to obtain maximum sugar yield on enzymic hydrolysis of pretreated wood. Two methods gave promising results: (1) supercrit. CO2-SO2 treatment, and (2) monoethanolamine (MEA) treatment. The MEA pretreatment removed above 90% of hardwood lignin while retaining 83% of carbohydrates. With CO2-SO2 pretreatment, the degree of lignin separation was lower. Under the scheme of SSF, the pretreated hardwood was converted. . . that 15 g of ABE/100 g of dry aspen wood was produced. In the overall process of SSF, the enzymic hydrolysis was the rate-limiting step. The ability of C. acetobutylicum to metabolize various 6-carbon and 5-carbon sugars resulted in efficient utilization of all available sugars from hardwood.

IT 7446-09-5, Sulfur dioxide, uses
 RL: USES (Uses)
 (hardwood pretreatment with supercrit. carbon dioxide and, for simultaneous saccharification and acetone-butanol fermentation)

IT 67-64-1P, Acetone, preparation 71-36-3P, Butanol, preparation
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
 (manufacture of, by simultaneous saccharification and fermentation of hardwood, pretreatment effect on)

IT 124-38-9, Carbon dioxide, uses
 RL: USES (Uses)
 (supercrit., sulfur dioxide mixture with, hardwood pretreatment with, for simultaneous saccharification and acetone-butanol fermentation)

L3 ANSWER 41 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:119341 CAPLUS
 DOCUMENT NUMBER: 112:119341
 TITLE: A method and apparatus for decomposition of polysaccharides by carbon dioxide laser beam

INVENTOR(S): Azuma, Junichi; Hosobuchi, Tsutomu; Katada, Tsutomu
 PATENT ASSIGNEE(S): Japan Chemical Engineering and Machinery Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 01224386 A 19890907 JP 1988-49105 19880301 <--
 PRIORITY APPLN. INFO.: JP 1988-49105 19880301

TI A method and apparatus for decomposition of polysaccharides by carbon dioxide laser beam

PI JP 01224386 A 19890907 Heisei
 PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 01224386 A 19890907 JP 1988-49105 19880301 <--

AB Irradiation of polysaccharides with CO2 laser beam melts the polysaccharides, cleaves the bond between the constituent monosaccharide units, and decomp. the polysaccharides without increase in the number of hydroxy groups to give water-soluble, low mol. weight compds. The decomposition (saccharification) products do not have a terminal reducing group in contrast to hydrolysis, but contain, e.g. 1,6-anhydro-β-D-glucopyranose at the terminal as shown in oligosaccharides I (n > 0) obtained from cellulose, and are. . . CO2 laser oscillator, a reflecting mirror, and a nozzle equipped with a condenser lens and assist gas entry, wherein the polysaccharides are placed in the defocus zone under the nozzle.

ST saccharification polysaccharide carbon dioxide laser; carbon dioxide laser polysaccharide decompn app

IT Food
 (additives for, decomposition products of polysaccharides as, preparation of, by carbon dioxide laser)

IT Oligosaccharides
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (anhydroglucopyranose containing, preparation of, by carbon dioxide laser decomposition of cellulose)

IT Polysaccharides, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (decomposition of, by carbon dioxide laser, apparatus for)

IT Saccharification
 (of polysaccharides, by carbon dioxide laser)

IT Food
 (dietetic, decomposition products of polysaccharides, preparation of, by carbon dioxide laser)

IT Photolysis
 (laser-induced, of polysaccharides, apparatus for)

IT 9004-34-6, Cellulose, reactions 9005-25-8, Starch, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (decomposition of, by carbon dioxide laser)

L3 ANSWER 42 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:81923 CAPLUS

DOCUMENT NUMBER: 110:81923

TITLE: Bacterial population development and chemical characteristics of refuse decomposition in a simulated sanitary landfill

AUTHOR(S): Barlaz, M. A.; Schaefer, D. M.; Ham, R. K.

CORPORATE SOURCE: Dep. Civ. Environ. Eng., Univ. Wisconsin, Madison, WI, 53706, USA

SOURCE: Applied and Environmental Microbiology (1989), 55(1), 55-65

CODEN: AEMIDF; ISSN: 0099-2240

DOCUMENT TYPE: Journal

LANGUAGE: English

SO Applied and Environmental Microbiology (1989), 55(1), 55-65

CODEN: AEMIDF; ISSN: 0099-2240

AB . . . the pH of the refuse ecosystem from 7.5 to 5.7 was attributed to the accumulation of acidic end products of sugar fermentation, to the low acid-consuming activity of the acetogenic and methanogenic bacteria, and to levels of O and NO₃⁻ in the fresh refuse sufficient for oxidation of only 8% of the sugars to CO₂ and H₂O. Cellulose and hemicellulose decomposition was most rapid after establishment of the methanogenic and acetogenic populations and a reduction in the initial accumulation of carboxylic acids. A total of 72% of these carbohydrates were degraded in the container sampled after 111 days. Initially acetate utilization, but ultimately polymer hydrolysis, limited the rate of refuse conversion to CH₄. Microbial and chemical composition data were combined to formulate an updated description. . .

IT Carbohydrates and Sugars, uses and miscellaneous

Carboxylic acids, uses and miscellaneous

Nitrates, uses and miscellaneous

Phosphates, uses and miscellaneous

Sulfates, uses and miscellaneous

Sulfides, uses and miscellaneous

RL: USES (Uses)

(in leachate, of landfills, refuse biodecompn. in relation to)

IT 74-82-8P, Methane, preparation 124-38-9P, Carbon

dioxide, preparation

RL: FORM (Formation, nonpreparative); PREP (Preparation)

(formation of, in refuse biodecompn. in landfills)

L3 ANSWER 43 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:628659 CAPLUS

DOCUMENT NUMBER: 109:228659

TITLE: Carbon dioxide enrichment and its relationship to bioconversion of cellulosic biomass of sweet potato (*Ipomoea batatas* L.) into fermentable sugars

AUTHOR(S): Bhattacharya, S.; Eatman, J. F.; Biswas, P. K.; Tolbert, M. E. M.

CORPORATE SOURCE: Carver Res. Found., Tuskegee Univ., Tuskegee, AL, 36088, USA

SOURCE: Biomass (1988), 15(4), 259-68

CODEN: BIOME9; ISSN: 0144-4565

DOCUMENT TYPE: Journal

LANGUAGE: English

TI Carbon dioxide enrichment and its relationship to bioconversion of cellulosic biomass of sweet potato (*Ipomoea batatas* L.) into fermentable sugars

SO Biomass (1988), 15(4), 259-68

CODEN: BIOME9; ISSN: 0144-4565

AB . . . $\mu\text{L/L}$ for 90 days. The leaves and stems after the harvest were used as substrates for the production of fermentable sugars. Elevated CO₂ concns. increased the cellulose content of stems, being most pronounced at 506 $\mu\text{L/L}$. Hemicellulose content of leaves and . . . enrichment. The increase in cellulosic biomass in plants grown in CO₂-enriched environment resulted in increased conversion of cellulose into fermentable sugars. The saccharification was greater in

stems than in leaves. It was also found that chemical pretreatment of stems and leaves enhanced the enzymic hydrolysis and the yields of glucose were higher than those from untreated stems and leaves.

ST carbon dioxide cellulose sugar sweet potato

IT Sweet potato
(fermentable sugars of leaves and stems of, carbon dioxide enrichment enhancement of bioconversion of)

IT Carbohydrates and Sugars, preparation
RL: PREP (Preparation)
(fermentable, conversion of sweet potato biomass to, carbon dioxide enrichment enhancement of)

IT Saccharification
(of sweet potato biomass, carbon dioxide enrichment enhancement of)

IT 124-38-9
RL: BIOL (Biological study)
(carbohydrates and Sugars, fermentable, conversion of sweet potato biomass to, carbon dioxide enrichment enhancement of)

IT 124-38-9, Carbon dioxide, biological studies
RL: BIOL (Biological study)
(enrichment in, bioconversion of sweet potato biomass into fermentable sugars enhancement by)

IT 9004-34-6, Cellulose, biological studies 9005-53-2, Lignin, biological studies 9034-32-6, Hemicellulose
RL: BIOL (Biological study)
(of sweet potato biomass, carbon dioxide enrichment effect on)

L3 ANSWER 44 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:226323 CAPLUS

DOCUMENT NUMBER: 108:226323

TITLE: Characteristics of the degradation of excess activated sludge in anaerobic acidogenic phase

AUTHOR(S): Li, Yuyou; Noike, Tatsuya

CORPORATE SOURCE: Dep. Civil Eng., Tohoku Univ., Sendai, 980, Japan

SOURCE: Suishitsu Odaku Kenkyu (1978-1991) (1987), 10(12), 729-40
CODEN: SOKEDN; ISSN: 0387-2025

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

SO Suishitsu Odaku Kenkyu (1978-1991) (1987), 10(12), 729-40
CODEN: SOKEDN; ISSN: 0387-2025

AB . . . sludge. About 60% of total COD of excess activated sludge was degraded in 130 days in the batch experiment The hydrolysis reaction is the rate-limiting step in overall anaerobic digestion. The hydrolysis rate of degradable materials in excess activated sludge is described by a linear equation. Hydrolytic rate consts. were: 0.44 - 0.89/day on the basis of volatile suspended solids and 0.32 - 0.65/day on the basis. . .

IT Carbohydrates and Sugars, preparation
Fatty acids, preparation
Lipids, preparation
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in acidogenic phase of secondary wastewater treatment sludge anaerobic digestion)

IT 64-19-7P, Acetic acid, preparation 74-82-8P, Methane, preparation

79-09-4P, Propionic acid, preparation 79-31-2P, Isobutyric acid
107-92-6P, Butyric acid, preparation 109-52-4P, Valeric acid,
preparation 124-38-9P, Carbon dioxide, preparation
503-74-2P, Isovaleric acid 7727-37-9P, Nitrogen, preparation
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in acidogenic phase of secondary wastewater treatment
sludge anaerobic digestion)

L3 ANSWER 45 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:192206 CAPLUS

DOCUMENT NUMBER: 108:192206

TITLE: The effects of environmental factors on acid-phase
digestion of sewage sludge

AUTHOR(S): Henry, Michael P.; Sajjad, Ashfaq; Ghosh, Sambhunath

CORPORATE SOURCE: Inst. Gas Technol., Chicago, IL, 60616, USA

SOURCE: Proceedings of the Industrial Waste Conference (
1988), Volume Date 1987, 42nd, 727-37
CODEN: PIWCAX; ISSN: 0073-7682

DOCUMENT TYPE: Journal

LANGUAGE: English

SO Proceedings of the Industrial Waste Conference (1988), Volume
Date 1987, 42nd, 727-37

CODEN: PIWCAX; ISSN: 0073-7682

AB Feed hydrolysis and liquefaction efficiencies in acid-phase
digestion of sewage sludge increased with culture pH and temperature, but were
not significantly affected. . . the greatest impact on organic removals,
which were 14-23% higher in cultures operated at pH 7 than at pH 5.
Carbohydrate removals were influenced more strongly by pH than
were lipid or crude protein removals. Culture temperature influenced
carbohydrate and protein removal, but had no significant effect on
lipid removals. Methanogenesis was retarded under acidic pH or
thermophilic conditions.

IT Carbohydrates and Sugars, uses and miscellaneous

Lipids, uses and miscellaneous

Proteins, uses and miscellaneous

RL: REM (Removal or disposal); PROC (Process)
(removal of, from sewage sludge, by acid-phase digestion, pH and
retention time and temperature effect on)

IT 64-19-7P, Acetic acid, preparation 79-09-4P, Propionic acid, preparation
79-31-2P, Isobutyric acid 107-92-6P, Butyric acid, preparation
109-52-4P, Valeric acid, preparation 142-62-1P, Caproic acid,
preparation 503-74-2P, Isovaleric acid 7664-41-7P, Ammonia,
preparation

RL: FORM (Formation, nonpreparative); PREP (Preparation)

(formation of, in acid-phase digestion of sewage sludge, pH and
retention time and temperature effect on)

IT 74-82-8, Methane, uses and miscellaneous 124-38-9, Carbon
dioxide, uses and miscellaneous

RL: USES (Uses)

(in biogas, from acid-phase digestion of sewage sludge, environmental
factor effect on)

L3 ANSWER 46 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:199140 CAPLUS

DOCUMENT NUMBER: 106:199140

TITLE: Conversion of biomass carbohydrates into
hydrocarbon products

AUTHOR(S): Hanniff, Mohammed I.; Dao, Le H.
CORPORATE SOURCE: INRS, Inst. Natl. Rech. Sci., Varennes, QC, J0L 2P0, Can.
SOURCE: Energy from Biomass and Wastes (1987), 10th, 831-43
CODEN: EBWADU; ISSN: 0277-7851
DOCUMENT TYPE: Journal
LANGUAGE: English

TI Conversion of biomass carbohydrates into hydrocarbon products
SO Energy from Biomass and Wastes (1987), 10th, 831-43
CODEN: EBWADU; ISSN: 0277-7851

AB . . . ZSM-5 zeolite catalyst to prepare hydrocarbon fuels and chems. The substrates were used as models of compns. obtained in acid hydrolysis of cellulosic materials. The effect of temperature, MeOH [67-56-1], and H2O addition on the catalytic process efficiency were evaluated.

ST hydrocarbon catalytic conversion furfural monosaccharide; zeolite catalyst carbohydrate fuel chem

IT Coke
RL: FORM (Formation, nonpreparative)
(formulation of, in catalytic conversion of carbohydrates and furfural, for fuels and chemical manufacture)

IT Fuels
Aromatic hydrocarbons, preparation
RL: PREP (Preparation)
(manufacture of, from carbohydrates and furfural, with zeolite catalysts)

IT Hydrocarbons, preparation
RL: PREP (Preparation)
(C1-8, manufacture of, from carbohydrates and furfural, with zeolite catalysts)

IT Alkenes, preparation
RL: PREP (Preparation)
(C2-6, manufacture of, from carbohydrates and furfural, with zeolite catalysts)

IT Zeolites, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(ZSM 5, catalysts, for fuels and chemical manufacture, from carbohydrates and furfural)

IT Aromatic hydrocarbons, preparation
RL: PREP (Preparation)
(polycyclic, manufacture of, from carbohydrates and furfural, with zeolite catalysts)

IT 67-56-1, Methanol, uses and miscellaneous 7732-18-5, Water, uses and miscellaneous
RL: USES (Uses)
(catalytic conversion of carbohydrates and furfural in presence of, with zeolites)

IT 124-38-9P, Carbon dioxide, preparation 630-08-0P, Carbon monoxide, preparation
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in catalytic conversion of carbohydrates and furfural, for fuels and chemical manufacture)

IT 50-99-7, Glucose, uses and miscellaneous 56-81-5, Glycerol, uses and miscellaneous 57-48-7, Fructose, uses and miscellaneous 98-01-1, uses and miscellaneous 582-52-5 9004-34-6D, Cellulose, hydrolysis derivs. 20880-92-6

RL: USES (Uses)
(hydrocarbon fuels and chemical manufacture from, by catalytic conversion,
with
zeolites)

IT 1335-30-4P

RL: PREP (Preparation)

(zeolites, ZSM 5, catalysts, for fuels and chemical manufacture, from
carbohydrates and furfural)

L3 ANSWER 47 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:121590 CAPLUS

DOCUMENT NUMBER: 106:121590

TITLE: Fractionation of two tropical wood (eucalyptus and
wapa) by thermomechanical aqueous phase treatment.
Part II. Chemical characteristics of the residual
solids and kinetic considerations of the
solubilization of the hemicellulose

AUTHOR(S): Carrasco, F.; Chornet, E.; Overend, R. P.; Heitz, M.

CORPORATE SOURCE: Univ. Sherbrooke, Sherbrooke, QC, J1K 2R1, Can.

SOURCE: Canadian Journal of Chemical Engineering (1987
) , 65(1), 71-7

CODEN: CJCEA7; ISSN: 0008-4034

DOCUMENT TYPE: Journal

LANGUAGE: French

SO Canadian Journal of Chemical Engineering (1987), 65(1), 71-7

CODEN: CJCEA7; ISSN: 0008-4034

AB . . . decompression through an orifice ($\Delta P = 17.2$ Mapa), reaction
at 80-230°, and rapid quenching. The residues were analyzed by
acid hydrolysis and elemental anal. The quantification of the
monosaccharides present in the residues allowed study of the
solubilization profiles of both. . .

IT Carbohydrates and Sugars, preparation

RL: FORM (Formation, nonpreparative); PREP (Preparation)

(formation of, in aqueous liquefaction of tropical wood)

IT Liquefaction

(hydrolytic thermomech., of tropical wood, solubilization
kinetics of hemicellulose in relation to)

IT Kinetics of hydrolysis

(of hemicellulose in tropical wood, thermomech. liquefaction in
relation to)

IT 50-99-7P, Glucose, preparation 58-86-6P, Xylose, preparation 59-23-4P,
preparation 3458-28-4P 10323-20-3P

RL: FORM (Formation, nonpreparative); PREP (Preparation)

(formation of, in aqueous liquefaction of tropical wood)

IT 124-38-9P, Carbon dioxide, preparation

RL: FORM (Formation, nonpreparative); PREP (Preparation)

(formation of, in thermomech. aqueous liquefaction of tropical wood,
kinetics of)

L3 ANSWER 48 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:89555 CAPLUS

DOCUMENT NUMBER: 106:89555

TITLE: Treatment characteristics of the two phase anaerobic
digestion system using an upflow filter

AUTHOR(S): Tanaka, S.; Matsuo, T.

CORPORATE SOURCE: Dep. Civ. Eng., Meisei Univ., Hino, 191, Japan

SOURCE: Water Science and Technology (1986),

18(7-8), 217-24

CODEN: WSTED4; ISSN: 0273-1223

DOCUMENT TYPE: Journal

LANGUAGE: English

SO Water Science and Technology (1986), 18(7-8), 217-24

CODEN: WSTED4; ISSN: 0273-1223

AB . . . methanogenesis) resulted in a COD removal of 92% at an overall hydraulic residence time of 4.4 days. The decomposition of carbohydrates and proteins was 95% and 50%, resp., during the acid phase. Lipids were rapidly hydrolyzed to long-chain fatty acids but not degraded during the acid phase. All milk constituents were completely decomposed during the CH4. . .

IT Carbohydrates and Sugars, uses and miscellaneous

Lipids, uses and miscellaneous

Proteins, uses and miscellaneous

RL: REM (Removal or disposal); PROC (Process)

(removal of, from wastewater from powdered milk manufacture, two-phase anaerobic process in)

IT 64-17-5P, Ethanol, biological studies 64-19-7P, Acetic acid, biological studies 79-09-4P, Propionic acid, biological studies 107-92-6P, n-Butyric acid, biological studies 109-52-4P, n-Valeric acid, biological studies

RL: BIOL (Biological study); PREP (Preparation)

(formation and utilization of, in two-phase anaerobic treatment of wastewater from powdered milk manufacture)

IT 74-82-8P, Methane, preparation 124-38-9P, Carbon dioxide, uses and miscellaneous

RL: FORM (Formation, nonpreparative); PREP (Preparation)

(formation of, in two-phase anaerobic treatment of wastewater from powdered milk manufacture)

L3 ANSWER 49 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:55219 CAPLUS

DOCUMENT NUMBER: 106:55219

TITLE: Performance of bacterial strains used for distillery waste treatment on different substrates

AUTHOR(S): Kumar, Santosh; Viswanathan, L.

CORPORATE SOURCE: Biochem. Div., Natl. Sugar Inst., Kanpur, 208017, India

SOURCE: Enzyme and Microbial Technology (1986), 8(12), 718-24

CODEN: EMTED2; ISSN: 0141-0229

DOCUMENT TYPE: Journal

LANGUAGE: English

SO Enzyme and Microbial Technology (1986), 8(12), 718-24

CODEN: EMTED2; ISSN: 0141-0229

AB . . . different substrates. Glucose [50-99-7] and xylose [58-86-6] exhibited growth patterns similar to that on spent wash water. Glucose, xylose, casein hydrolyzate, and amino acids led to a significant decrease in COD when compared to glycerol [56-81-5]. The rate of substrate consumption was maximum in the case of glucose followed by amino acids, casein hydrolyzate, xylose, and glycerol. Volatile acid and CO2 formation from glucose was .apprx.50% of the theor. yield based on glycolysis and. . .

IT Amino acids, uses and miscellaneous

Carbohydrates and Sugars, uses and miscellaneous

RL: REM (Removal or disposal); PROC (Process)

(removal of, from distillery waste, acclimated bacteria in)
 IT Caseins, compounds
 RL: REM (Removal or disposal); PROC (Process)
 (hydrolyzates, removal of, from waste, of distillery plant,
 acclimated bacteria in)
 IT 124-38-9P, Carbon dioxide, preparation
 RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, in distillery waste treatment, acclimated bacteria in)

L3 ANSWER 50 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:6671 CAPLUS
 DOCUMENT NUMBER: 106:6671
 TITLE: Utilization of carbonic gas in the invert
sugar process
 INVENTOR(S): Ferreira, Vitor Francisco; Paiva, Lucia Moreira
 Campos; Esteves, Angela Maria Lavogade
 PATENT ASSIGNEE(S): Instituto Nacional de Tecnologia (INT), Brazil
 SOURCE: Braz. Pedido PI, 6 pp.
 CODEN: BPXXDX
 DOCUMENT TYPE: Patent
 LANGUAGE: Portuguese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BR 8502612	A	19851105	BR 1985-2612	19850531 <--
PRIORITY APPLN. INFO.:			BR 1985-2612	19850531

TI Utilization of carbonic gas in the invert sugar process

PI BR 8502612 A 19851105

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BR 8502612	A	19851105	BR 1985-2612	19850531 <--

AB A process for hydrolysis of sucrose to produce invert
sugar uses CO2 dissolved in water as acid catalyst and eliminates
 the need to purify the invert sugar solution Yields depend on the
 CO2 pressure. Thus, CO2 was bubbled into a 1.5 L 40% aqueous solution of
 crystalline

sugar for 5 min and then the CO2 pressure was adjusted to 3 or 4
 atmospheric; the mixture was heated to. . .

ST invert sugar hydrolysis sucrose; carbonic acid invert

sugar manuf; carbon dioxide invert

sugar manuf

IT Hydrolysis catalysts

(acid, carbonic, for sucrose solution in invert sugar syrup
 manufacture)

IT 463-79-6, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for hydrolysis of sucrose solution to invert
sugar syrups)

IT 124-38-9, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)

(catalysts, in manufacture of invert sugar syrups)

IT 57-50-1, Sucrose, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(hydrolysis of, to invert sugar syrup, carbonic
 acid-catalyzed)

IT 8013-17-0P, Invert sugar
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of, catalysts for, carbonic acid solution as)

L3 ANSWER 51 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1986:445143 CAPLUS
DOCUMENT NUMBER: 105:45143
TITLE: A new process for obtaining inverted sugar
using carbon dioxide
AUTHOR(S): Esteves, A. M. L.; Ferreira, V. F.; Paiva, L. M. C.
CORPORATE SOURCE: Div. Prod. Nat., Inst. Nac. Tecnol., Rio de Janeiro,
Brazil
SOURCE: Starch/Staerke (1986), 38(5), 173-5
CODEN: STARDD; ISSN: 0038-9056
DOCUMENT TYPE: Journal
LANGUAGE: English

TI A new process for obtaining inverted sugar using carbon dioxide
SO Starch/Staerke (1986), 38(5), 173-5
CODEN: STARDD; ISSN: 0038-9056
AB Hydrolysis of 60% sucrose (I) [57-50-1] in the presence of CO₂
at 125° gave invert sugar [8013-17-0]. The reducing
power of sugar mixture increased with increasing reaction time and
CO₂ pressure, and at 4 atm and after 130 min, the efficiency of. . .
ST sucrose inversion carbon dioxide; invert sugar
prepn sucrose
IT 124-38-9, uses and miscellaneous
RL: USES (Uses)
(inversion of sucrose in presence of, invert sugar preparation in
relation to)
IT 57-50-1, reactions
RL: USES (Uses)
(inversion of, in presence of carbon dioxide,
invert sugar preparation in relation to)
IT 8013-17-0P
RL: PREP (Preparation)
(preparation of, by inversion of sucrose in presence of carbon dioxide)

L3 ANSWER 52 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1986:110043 CAPLUS
DOCUMENT NUMBER: 104:110043
TITLE: Unprotected sugar phosphinimines: a facile
route to cyclic carbamates of amino sugars
AUTHOR(S): Kovacs, Jozsef; Pinter, Istvan; Messmer, Andras; Toth,
Gabor
CORPORATE SOURCE: Cent. Res. Inst. Chem., Hung. Acad. Sci., Budapest,
H-1525, Hung.
SOURCE: Carbohydrate Research (1985), 141(1), 57-65
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 104:110043

TI Unprotected sugar phosphinimines: a facile route to cyclic
carbamates of amino sugars
SO Carbohydrate Research (1985), 141(1), 57-65
CODEN: CRBRAT; ISSN: 0008-6215

AB Unprotected sugar phosphinimines were prepared from various azido sugars by reaction with PPh3 and were converted by CO2 into cyclic carbamates of amino sugars. The reaction could be carried out more conveniently in a one-pot process without isolation of the phosphinimines. The 13C and. . .

ST azidohexopyranoside triphenylphosphine redn; hexopyranosyltriphenylphosphinimide cyclization carbon dioxide; aminodioxihexopyranoside cyclic carbamate

IT Monosaccharides
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (aminodeoxyhexopyranoside cyclic carbamates, preparation of, from hexopyranoside phosphinimines)

IT Carbonylation
 (of pyranosyltriphenylphosphinimides with carbon dioxide, pyranoside cyclic carbamates from)

IT 95342-53-3P 100639-16-5P 100759-72-6P 100759-74-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and acetylation of)

IT 100639-17-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and acetylation of, with sodium acetate)

IT 100639-14-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and carbonylation of)

IT 100639-11-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and hydrolysis of)

IT 7284-37-9P 95266-86-7P 100639-10-9P 100639-12-1P 100639-13-2P 100639-15-4P 100639-18-7P 100759-73-7P 100759-75-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L3 ANSWER 53 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1984:485678 CAPLUS

DOCUMENT NUMBER: 101:85678

TITLE: Increasing sugar yield in sugarcane with 2-(2-imidazolin-2-yl)pyridine compounds

INVENTOR(S): Orwick, Philip L.; Templeton, Andrew R.

PATENT ASSIGNEE(S): American Cyanamid Co. , USA

SOURCE: U.S., 28 pp. Cont.-in-part of U.S. Ser. No. 155,900, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 4404012	A	19830913	US 1981-255937	19810420 <--
AU 8171215	A	19811210	AU 1981-71215	19810601 <--
AU 545949	B2	19850808		
BR 8103446	A	19820224	BR 1981-3446	19810601 <--

ZA 8103676 A 19820630 ZA 1981-3676 19810602 <--
 PRIORITY APPLN. INFO.: US 1980-155900 A2 19800602
 US 1981-255937 A 19810420

OTHER SOURCE(S): CASREACT 101:85678; MARPAT 101:85678

TI Increasing sugar yield in sugarcane with 2-(2-imidazolin-2-yl)pyridine compounds

PI US 4404012 A 19830913

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4404012	A	19830913	US 1981-255937	19810420 <--
AU 8171215	A	19811210	AU 1981-71215	19810601 <--
AU 545949	B2	19850808		
BR 8103446	A	19820224	BR 1981-3446	19810601 <--
ZA 8103676	A	19820630	ZA 1981-3676	19810602 <--

AB . . . etc.) prepared by several methods were applied to the sugarcane foliage 2-4 wk before the 1st harvest to increase the sugar yield. Thus, the effectiveness of I was demonstrated with a 2% organic solution of 2-(5-isopropyl-5-methyl-4-oxo-2-imidazolin-2-yl)nicotine acid (I; R1 = Me, R2 = CHMe2, R3 = O, R4R7 = H, R8 = CO2H) [81334-34-1] prepared by the hydrolysis of Me 2-(2-isopropyl-5-methyl-4-oxo-2-imidazolinylnicotinate [81333-51-9], applied to johnson grass plants in the greenhouse which 8 days after treatment exuded a sugar solution in droplets along the plant stem.

ST imidazolinylnicotinate prepn sugar enhancer sugarcane

IT Carbohydrates and Sugars, biological studies
 RL: BIOL (Biological study)
 (enhancement of, in sugarcane, imidazolinylnicotinates for)

IT Plant hormones and regulators
 RL: BIOL (Biological study)
 (imidazolinylnicotinates, for sugar yield enhancement in sugarcane)

IT 81334-46-5P 81334-47-6P 81334-48-7P 81334-49-8P 81334-50-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and chlorination-amidation of)

IT 81333-43-9P 81333-44-0P 81333-45-1P 81333-46-2P 81334-44-3P
 81334-45-4P 81334-53-4P 81334-54-5P 81334-55-6P 81334-56-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and cyclization of)

IT 81335-05-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and deacetylation of)

IT 81334-82-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and deprotection-carboxylation of)

IT 81333-33-7P 81333-34-8P 81333-35-9P 81333-36-0P 81333-37-1P
 81333-38-2P 81333-39-3P 81333-40-6P 81333-41-7P 81333-42-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and hydrolysis of)

IT 81333-47-3P 81333-48-4P 81333-49-5P 81333-50-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and reaction with methanol and sodium hydride)

IT 81334-57-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and reaction with methyllithium and carbon
dioxide)

IT 81342-34-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and silylation of)

IT 81333-51-9P 81333-53-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and sugar yield enhancement in sugarcane)

IT 81334-29-4P 81334-34-1P 81334-38-5P 81335-07-1P 81510-83-0P
 91264-16-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and sugar yield enhancement in sugarcane by)

IT 81333-52-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

IT 81333-65-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of and sugar yield enhancing by, in sugarcane)

IT 81333-75-7P 81334-31-8P 81334-35-2P 81334-36-3P 81334-37-4P
 81334-39-6P 81334-41-0P 81334-43-2P 81334-58-9P 81334-59-0P
 81334-61-4P 81334-62-5P 81334-63-6P 81334-64-7P 81334-65-8P
 81334-66-9P 81334-67-0P 81334-68-1P 81334-69-2P 81334-70-5P
 81334-71-6P 81334-72-7P 81334-73-8P 81334-74-9P 81334-75-0P
 81334-76-1P 81334-77-2P 81334-78-3P 81334-79-4P 81334-80-7P
 81334-81-8P 81342-33-8P 81342-93-0P 81342-94-1P 81342-95-2P
 81361-67-3P 81510-44-3P 104098-48-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, as sugar yield enhancer for sugarcane)

IT 81334-22-7P 81334-30-7P 81334-83-0P 81334-84-1P 81334-85-2P
 81334-86-3P 81334-87-4P 81334-88-5P 81334-89-6P 81334-90-9P
 81334-91-0P 81334-92-1P 81334-93-2P 81334-94-3P 81334-95-4P
 81334-96-5P 81334-97-6P 81334-98-7P 81334-99-8P 81335-00-4P
 81335-01-5P 81335-02-6P 81335-03-7P 81335-04-8P 81335-06-0P
 81335-09-3P 81335-10-6P 81335-11-7P 81335-12-8P 81335-13-9P
 81335-14-0P 81335-15-1P 81335-16-2P 81335-17-3P 81335-20-8P
 81335-21-9P 81335-22-0P 81335-76-4P 81335-78-6P 81510-49-8P
 81510-50-1P 91535-74-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, as sugar yield enhancer in sugarcane)

IT 81333-51-9P 81333-54-2P 81333-55-3P 81333-56-4P 81333-57-5P
 81333-58-6P 81333-59-7P 81333-60-0P 81333-61-1P 81333-62-2P
 81333-63-3P 81333-64-4P 81333-66-6P 81333-67-7P 81333-68-8P
 81333-69-9P 81333-70-2P 81333-71-3P 81333-72-4P 81333-73-5P
 81333-74-6P 81333-76-8P 81333-77-9P 81333-78-0P 81333-79-1P
 81333-80-4P 81333-81-5P 81333-82-6P 81333-83-7P 81333-84-8P
 81333-85-9P 81333-86-0P 81333-87-1P 81333-88-2P 81333-89-3P
 81333-90-6P 81333-91-7P 81333-92-8P 81333-93-9P 81333-94-0P
 81333-95-1P 81333-96-2P 81333-97-3P 81333-98-4P 81333-99-5P
 81334-00-1P 81334-01-2P 81334-02-3P 81334-03-4P 81334-04-5P
 81334-05-6P 81334-06-7P 81334-07-8P 81334-08-9P 81334-09-0P
 81334-10-3P 81334-11-4P 81334-12-5P 81334-13-6P 81334-15-8P
 81334-16-9P 81334-17-0P 81334-18-1P 81334-19-2P 81334-20-5P
 81334-21-6P 81334-22-7P 81334-23-8P 81334-24-9P 81334-27-2P

81334-28-3P 81342-31-6P 81342-32-7P 91282-38-1P
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of, as sugar yield enhancer, in sugarcane)

L3 ANSWER 54 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1983:590232 CAPLUS

DOCUMENT NUMBER: 99:190232

TITLE: Prebiotic synthesis in atmospheres containing methane,
carbon monoxide, and carbon dioxide
. II. Hydrogen cyanide, formaldehyde and ammonia
AUTHOR(S): Schlesinger, Gordon; Miller, Stanley L.
CORPORATE SOURCE: Dep. Chem., Univ. California, La Jolla, CA, 92093, USA
SOURCE: Journal of Molecular Evolution (**1983**),
19(5), 383-90
CODEN: JMEVAU; ISSN: 0022-2844

DOCUMENT TYPE: Journal

LANGUAGE: English

TI Prebiotic synthesis in atmospheres containing methane, carbon monoxide,
and carbon dioxide. II. Hydrogen cyanide, formaldehyde
and ammonia

SO Journal of Molecular Evolution (**1983**), 19(5), 383-90
CODEN: JMEVAU; ISSN: 0022-2844

AB . . . of urea (0.02-0.63%) based on N were also obtained. The directly
synthesized NH₃ together with the NH₃ obtained from the hydrolysis
of HCN, nitriles, and urea could have been a major source of NH₃ in the
atmospheric and oceans of the primitive earth. Prebiotic syntheses from HCN
and

H₂CO to give products such as purines and sugars and some amino
acids could have occurred in primitive atms. containing CO and CO₂ provided
the H₂/CO and H₂/CO₂ ratios. . .

ST . . . formation prebiotic atm; formaldehyde formation prebiotic atm;
ammonia formation prebiotic atm; methane conversion prebiotic evolution;
carbon monoxide conversion prebiotic evolution; carbon
dioxide conversion prebiotic evolution

IT 50-00-0P, biological studies 57-13-6P, biological studies 74-90-8P,
biological studies 7664-41-7P, biological studies
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP**
(**Preparation**); RACT (Reactant or reagent)
(prebiotic synthesis of, in methane and other atms.)

L3 ANSWER 55 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1982:425913 CAPLUS

DOCUMENT NUMBER: 97:25913

TITLE: Hydrolysis of calcium sulfide

INVENTOR(S): Tude, Joao Alberto Lessa; Legey, Jose Carlos Loureiro

PATENT ASSIGNEE(S): NATRON-Consultoria e Projetos S. A., Brazil

SOURCE: Braz. Pedido PI, 13 pp.

CODEN: BPXXDX

DOCUMENT TYPE: Patent

LANGUAGE: Portuguese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BR 8106761	A	19820216	BR 1981-6761	19811020 <--
PRIORITY APPLN. INFO.:			BR 1981-6761	A 19811020

TI Hydrolysis of calcium sulfide

PI BR 8106761 A 19820216

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	BR 8106761	A	19820216	BR 1981-6761	19811020 <--
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AB In the treatment of CaS to obtain H₂S by hydrolysis,
sugar, NH₄Cl, formic acid, AcOH, EDTA, and salts of the acids are
added and the solution carbonated to liberate H₂S and. . .

ST calcium sulfide hydrolysis; sugar hydrolysis
calcium sulfide; EDTA hydrolysis calcium sulfide; acetic acid
reaction calcium sulfide

IT 20548-54-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(hydrolysis of, with carbon dioxide)

IT 7783-06-4P, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(manufacture of, by calcium sulfide hydrolysis with carbon
dioxide)

L3 ANSWER 56 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1981:515322 CAPLUS

DOCUMENT NUMBER: 95:115322

TITLE: Carboxylic acid derivatives and medicaments containing
them

INVENTOR(S): Griss, Gerhart; Sauter, Robert; Grell, Wolfgang;
Hurnaus, Rudolf; Rupprecht, Eckhard; Kaubisch,
Nikolaus; Kaehling, Joachim; Eisele, Bernhard; Piper,
Helmut; Noll, Klaus

PATENT ASSIGNEE(S): Thomae, Dr. Karl, G.m.b.H., Fed. Rep. Ger.

SOURCE: Eur. Pat. Appl., 271 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 23569	A1	19810211	EP 1980-103670	19800628 <--
EP 23569	B1	19830622		
R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
DE 2928352	A1	19810115	DE 1979-2928352	19790713 <--
DE 2949259	A1	19810611	DE 1979-2949259	19791207 <--
DE 3016650	A1	19811105	DE 1980-3016650	19800430 <--
DE 3016651	A1	19811105	DE 1980-3016651	19800430 <--
EP 63826	A2	19821103	EP 1982-104991	19800628 <--
EP 63826	A3	19821229		
EP 63826	B1	19841205		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
AT 3862	T	19830715	AT 1980-103670	19800628 <--
AT 10632	T	19841215	AT 1982-104991	19800628 <--
AU 8060362	A	19810115	AU 1980-60362	19800711 <--
AU 535924	B2	19840412		
HU 27876	A2	19831128	HU 1983-1085	19800711 <--
HU 186675	B	19850930	HU 1980-1085	19800711 <--
ES 493608	A2	19811216	ES 1980-493608	19800721 <--
ES 502454	A3	19820716	ES 1981-502454	19810523 <--

ES 516258	A5	19840307	ES 1982-516258	19821006 <--
NO 8403735	A	19810114	NO 1984-3735	19840919 <--

PRIORITY APPLN. INFO.:

			DE 1979-2928352	A	19790713
			DE 1979-2949259	A	19791207
			DE 1980-3016650	A	19800430
			DE 1980-3016651	A	19800430
			DE 1976-2605790		19760213
			US 1979-59401	A	19790720
			EP 1980-103670	A	19800628
			EP 1982-104991		19800628
			JP 1981-159503	A	19811008

OTHER SOURCE(S): CASREACT 95:115322; MARPAT 95:115322

PI	EP 23569	<u>19810211</u>				
	PATENT NO.		KIND	DATE	APPLICATION NO.	DATE
	-----		----	-----	-----	-----
PI	EP 23569		A1	19810211	EP 1980-103670	19800628 <--
	EP 23569		B1	19830622		
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE					
	DE 2928352		A1	19810115	DE 1979-2928352	19790713 <--
	DE 2949259		A1	19810611	DE 1979-2949259	19791207 <--
	DE 3016650		A1	19811105	DE 1980-3016650	19800430 <--
	DE 3016651		A1	19811105	DE 1980-3016651	19800430 <--
	EP 63826		A2	19821103	EP 1982-104991	19800628 <--
	EP 63826		A3	19821229		
	EP 63826		B1	19841205		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE					
	AT 3862		T	19830715	AT 1980-103670	19800628 <--
	AT 10632		T	19841215	AT 1982-104991	19800628 <--
	AU 8060362		A	19810115	AU 1980-60362	19800711 <--
	AU 535924		B2	19840412		
	HU 27876		A2	19831128	HU 1983-1085	19800711 <--
	HU 186675		B	19850930	HU 1980-1085	19800711 <--
	ES 493608		A2	19811216	ES 1980-493608	19800721 <--
	ES 502454		A3	19820716	ES 1981-502454	19810523 <--
	ES 516258		A5	19840307	ES 1982-516258	19821006 <--
	NO 8403735		A	19810114	NO 1984-3735	19840919 <--

AB . . . Me), saponification of which gave 83% III (R6 = H). At 5 mg/kg (rats),

III (R = H) lowered blood sugar 44, 42, 38, and 35% after 1, 2, 3, and 4 h, resp.

IT Carboxylic acids, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and use of, as anticholesteremics and hypolipemics)

IT Amides, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, and use as antidiabetics)

IT 78253-93-7 78254-50-9 78254-87-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrolysis of)

IT 78266-38-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and Fridel-Crafts reaction of, with acetyl chloride)

IT 78253-98-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and Gatterman reaction of)

IT 78243-84-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and Gattermann and Sandmeyer reactions of, or diazotization and
hydrolysis of)

IT 16089-46-6P 78243-64-8P 78243-65-9P 78243-66-0P 78243-67-1P
78243-68-2P 78243-69-3P 78243-71-7P 78243-73-9P 78243-74-0P
78243-75-1P 78243-76-2P 78243-77-3P 78243-78-4P 78243-79-5P
78243-80-8P 78243-81-9P 78243-82-0P 78243-83-1P 78243-85-3P
78243-86-4P 78243-87-5P 78243-88-6P 78243-89-7P 78243-90-0P
78243-91-1P 78243-92-2P 78243-93-3P 78243-94-4P 78243-95-5P
78243-97-7P 78243-98-8P 78243-99-9P 78244-00-5P 78244-01-6P
78244-02-7P 78244-03-8P 78244-04-9P 78251-56-6P 78252-93-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and Gattermann reaction of)
IT 78243-70-6P 78243-72-8P 78243-96-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and Gattermann reaction of, or diazotization and
hydrolysis of)

IT 77266-76-3P 77266-82-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and Gattermann reaction of, or hydrolysis of)
IT 78252-12-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and Sandmeyer reaction of)

IT 78252-09-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and Sandmeyer reaction of, or diazotization and
hydrolysis of)

IT 15281-91-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and Sandmeyer reaction of, with aniline derivative)

IT 78253-86-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and Willgerodt reaction of, or oxidation with sodium
hypobromite)

IT 78253-91-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and acetalization or reaction of, with malonic acid)

IT 78254-01-0P 78254-03-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and conversion of, to ortho ester)

IT 78253-92-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and decomposition of)

IT 77266-73-0P 77266-81-0P 78243-23-9P 78243-24-0P 78243-25-1P
78243-26-2P 78243-27-3P 78243-28-4P 78243-29-5P 78243-30-8P
78243-31-9P 78243-32-0P 78243-33-1P 78243-34-2P 78243-35-3P
78243-36-4P 78243-37-5P 78243-38-6P 78243-39-7P 78243-40-0P
78243-41-1P 78243-42-2P 78243-43-3P 78243-44-4P 78243-45-5P

	78243-46-6P	78243-47-7P	78243-48-8P	78243-49-9P	78243-50-2P
	78243-51-3P	78243-52-4P	78243-53-5P	78243-54-6P	78243-55-7P
	78243-56-8P	78243-57-9P	78243-58-0P	78243-59-1P	78243-60-4P
	78243-61-5P	78251-55-5P	78252-11-6P	78252-95-6P	

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation and hydrogenation of)

IT 78252-99-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation and hydrogenolysis of)

IT 78253-90-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis and desulfuration of)

IT 78252-10-5P 78252-13-8P 78252-14-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

IT 77265-68-0P 77265-73-7P 77265-92-0P 77265-95-3P 77265-97-5P
77266-00-3P 77266-03-6P 77266-06-9P 77266-12-7P 77266-14-9P
77266-15-0P 77266-19-4P 77266-27-4P 77266-33-2P 77266-39-8P
77266-57-0P 78252-36-5P 78252-53-6P 78252-56-9P 78252-65-0P
78253-04-0P 78253-12-0P 78253-40-4P 78253-56-2P 78253-59-5P
78253-62-0P 78254-18-9P 78254-34-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); SPN (Synthetic preparation); BIOL (Biological
study); PREP (Preparation)
(preparation and hypoglycemic activity of)

IT 78254-44-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation and oxidation of, with silver oxide)

IT 78251-62-4P 78253-03-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with (aminoethyl)benzoate)

IT 78254-49-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with Et (aminoethyl)benzoate)

IT 77265-76-0P 77265-78-2P 77265-83-9P 77265-86-2P 77265-95-3P
77266-83-2P 77275-67-3P 78252-32-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with Me (aminoethyl)benzoate)

IT 78254-00-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with butyllithium and carbon
dioxide)

IT 78243-62-6P 78251-57-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with carbonyldiimidazole and Et benzoate
derivative)

IT 77265-94-2P 77265-99-7P 77266-02-5P 77266-05-8P 77266-08-1P

77266-18-3P	77266-23-0P	77266-26-3P	77266-29-6P	77266-32-1P
77266-35-4P	77266-38-7P	77266-44-5P	77266-47-8P	77266-50-3P
77266-53-6P	78244-07-2P	78244-09-4P	78251-58-8P	78251-78-2P
78251-79-3P	78251-80-6P	78251-83-9P	78251-84-0P	78251-85-1P
78251-86-2P	78251-87-3P	78251-88-4P	78251-89-5P	78251-90-8P
78251-91-9P	78251-92-0P	78251-93-1P	78251-96-4P	78251-97-5P
78251-98-6P	78251-99-7P	78252-01-4P	78252-02-5P	78252-03-6P
78252-04-7P	78252-05-8P	78252-06-9P	78252-15-0P	78252-22-9P
78252-23-0P	78252-24-1P	78252-25-2P	78252-26-3P	78252-27-4P
78252-28-5P	78252-29-6P	78252-30-9P		

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with carbonyldiimidazole and
aminoethylbenzoate)

IT 77275-68-4P 78251-94-2P 78251-95-3P 78252-00-3P 78252-21-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with carbonyldiimidazole and
aminoethylbenzoate, and anticholesteremic and hypolipemic activity of)

IT 78244-08-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with carbonyldiimidazole and aminoxybenzoate)

IT 78253-74-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with cyclohexanol)

IT 77266-75-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with hydroxypiperidine)

IT 77266-74-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with methyl(aminoethyl)benzoate)

IT 78251-85-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with thionyl chloride and Et
(aminoethyl)benzoate)

IT 78253-83-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with thionyl chloride, oxidation of, and
hypoglycemic activity of)

IT 78252-69-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and reactions of, and hypoglycemic activity of)

IT 78253-97-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and reduction of)

IT 77266-67-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(preparation and saponification and ethanolysis of)

IT 77266-20-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and saponification and hydrogenation of)

IT 77266-60-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and saponification and N-acetylation of)

IT 77265-64-6P 77265-71-5P 77265-74-8P 77265-77-1P 77265-79-3P
 77265-82-8P 77265-84-0P 77265-87-3P 77265-91-9P 77265-98-6P
 77266-01-4P 77266-04-7P 77266-07-0P 77266-09-2P 77266-13-8P
 77266-17-2P 77266-22-9P 77266-25-2P 77266-28-5P 77266-31-0P
 77266-34-3P 77266-37-6P 77266-40-1P 77266-43-4P 77266-46-7P
 77266-49-0P 77266-52-5P 77266-55-8P 77266-59-2P 77266-62-7P
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 78252-37-6P 78252-39-8P 78252-42-3P 78252-44-5P 78252-46-7P
 78252-49-0P 78252-51-4P 78252-54-7P 78252-57-0P 78252-58-1P
 78252-60-5P 78252-62-7P 78252-66-1P 78252-70-7P 78252-72-9P
 78252-74-1P 78252-76-3P 78252-78-5P 78252-80-9P 78252-82-1P
 78252-84-3P 78252-86-5P 78252-89-8P 78252-92-3P 78252-96-7P
 78253-02-8P 78253-05-1P 78253-07-3P 78253-09-5P 78253-11-9P
 78253-13-1P 78253-16-4P 78253-18-6P 78253-20-0P 78253-22-2P
 78253-24-4P 78253-26-6P 78253-28-8P 78253-30-2P 78253-32-4P
 78253-36-8P 78253-38-0P 78253-41-5P 78253-43-7P 78253-46-0P
 78253-49-3P 78253-51-7P 78253-53-9P 78253-55-1P 78253-57-3P
 78253-60-8P 78253-63-1P 78253-66-4P 78253-67-5P 78253-70-0P
 78253-72-2P 78253-73-3P 78254-15-6P 78254-17-8P 78254-20-3P
 78254-22-5P 78254-24-7P 78254-25-8P 78254-26-9P 78254-35-0P
 78254-37-2P 78254-46-3P 78266-31-6P 78266-36-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and saponification of)

IT 77265-93-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and saponification of and hypoglycemic activity of)

IT 77266-84-3P 78252-64-9P 78252-68-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and saponification of, and hypoglycemic activity of)

IT 78253-14-2P 78253-35-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and saponification or hydrogenation of)

IT 78254-54-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and N-alkylation of, by Et (bromoethyl)benzoate)

IT 78254-52-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and N-arylation by, of piperidine)

IT 77265-69-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and N-methylation of)

IT 78252-16-1P 78252-18-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and O-alkylation of)

IT 78252-17-2P 78252-19-4P 78252-20-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
 (preparation and O-methylation of)

IT 77266-16-1P 77266-21-8P 77266-24-1P 77266-30-9P 77266-36-5P
 77266-42-3P 77266-45-6P 77266-48-9P 77266-51-4P 77266-54-7P
 77266-58-1P 77266-61-6P 77266-63-8P 77266-66-1P 77266-70-7P
 77266-72-9P 77266-78-5P 77266-80-9P 78251-59-9P 78251-63-5P
 78251-66-8P 78251-68-0P 78251-70-4P 78251-72-6P 78251-74-8P
 78251-77-1P 78251-81-7P 78251-82-8P 78252-07-0P 78252-38-7P
 78252-41-2P 78252-43-4P 78252-45-6P 78252-48-9P 78252-50-3P
 78252-59-2P 78252-61-6P 78252-63-8P 78252-67-2P 78252-71-8P
 78252-73-0P 78252-75-2P 78252-77-4P 78252-79-6P 78252-81-0P
 78252-83-2P 78252-85-4P 78252-88-7P 78252-91-2P 78252-94-5P
 78252-98-9P 78253-01-7P 78253-06-2P 78253-08-4P 78253-10-8P
 78253-15-3P 78253-17-5P 78253-19-7P 78253-21-1P 78253-23-3P
 78253-25-5P 78253-27-7P 78253-29-9P 78253-31-3P 78253-34-6P
 78253-37-9P 78253-42-6P 78253-45-9P 78253-48-2P 78253-50-6P
 78253-52-8P 78253-54-0P 78253-55-1P 78253-65-3P 78253-69-7P
 78253-75-5P 78253-76-6P 78253-77-7P 78253-78-8P 78253-79-9P
 78253-80-2P 78253-81-3P 78253-82-4P 78253-84-6P 78253-88-0P
 78253-89-1P 78253-94-8P 78253-95-9P 78253-96-0P 78253-99-3P
 78254-02-1P 78254-04-3P 78254-05-4P 78254-07-6P 78254-08-7P
 78254-09-8P 78254-10-1P 78254-11-2P 78254-12-3P 78254-13-4P
 78254-14-5P 78254-19-0P 78254-28-1P 78254-30-5P 78254-31-6P
 78254-32-7P 78254-33-8P 78254-36-1P 78254-38-3P 78254-39-4P
 78254-41-8P 78254-43-0P 78254-45-2P 78254-48-5P 78254-53-2P
 78255-45-5P 78255-46-6P 78255-47-7P 78266-32-7P 78266-33-8P
 78266-34-9P 78266-37-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L3 ANSWER 57 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1966:492924 CAPLUS

DOCUMENT NUMBER: 65:92924

ORIGINAL REFERENCE NO.: 65:17414d-e

TITLE: The effect of various inorganic nitrogen sources on
 the carbon dioxide output and keto
 acid production by mats of Fusarium oxysporum

AUTHOR(S): Said, H.; Harhash, A. W.

CORPORATE SOURCE: Univ. Cairo

SOURCE: Acta Biologica et Medica Germanica (1966),
 17(2), 127-34

CODEN: ABMGJ; ISSN: 0001-5318

DOCUMENT TYPE: Journal

LANGUAGE: English

TI The effect of various inorganic nitrogen sources on the carbon
dioxide output and keto acid production by mats of Fusarium
 oxysporum

SO Acta Biologica et Medica Germanica (1966), 17(2), 127-34

CODEN: ABMGJ; ISSN: 0001-5318

AB Spores or fungal mats of F. oxysporum hydrolyzed sucrose in the
 culture medium prior to its absorption. The rate of sucrose inversion was

greater than the rate of sugar absorption, and consequently, reducing sugars accumulated in the medium. No enzyme was detected in the culture medium that could invert sucrose after the fungal mats. . . .

IT 127-17-3P, Pyruvic acid 328-50-7P, Glutaric acid, 2-oxo-
RL: PREP (Preparation)
(formation of, by *Fusarium oxysporum*, N source effect on)

L3 ANSWER 58 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1966:440744 CAPLUS

DOCUMENT NUMBER: 65:40744

ORIGINAL REFERENCE NO.: 65:7639h,7640a

TITLE: Assimilation of 14C-labeled carbon dioxide by Barlinka grape berries

AUTHOR(S): Meynhardt, J. T.

CORPORATE SOURCE: Fruit Food Technol. Res. Inst., Stellenbosch, S. Afr.

SOURCE: Natl. Conf. Nucl. Energy Appl. Isotopes Radiation,
Proc. Pretoria (1963) 456-63

DOCUMENT TYPE: Journal

LANGUAGE: English

TI Assimilation of 14C-labeled carbon dioxide by Barlinka
grape berries

SO Natl. Conf. Nucl. Energy Appl. Isotopes Radiation, Proc. Pretoria (1963) 456-63

AB . . . incorporation of 14C into the fourth C of malic acid indicates that it is mainly formed by a dark reaction. Sugars and sugar phosphates were highly labeled in the light treatment, most of the label being incorporated into the green berries as opposed to fully mature berries. During the dark treatment, sugars and sugar phosphates were only slightly labeled. Both light and dark treatments resulted in the production of some highly radioactive free amino acids and some labeling of protein hydrolyzate derived amino acids.

IT Grapes

(carbon dioxide metabolism by, light effect on)

IT 124-38-9, Carbon dioxide

(fixation or metabolism of, by grapes, light effect on)

IT 6915-15-7P, Malic acid

RL: PREP (Preparation)

(formation of, by grapes in light vs. dark CO2 fixation)

L3 ANSWER 59 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1966:430370 CAPLUS

DOCUMENT NUMBER: 65:30370

ORIGINAL REFERENCE NO.: 65:5656g-h

TITLE: Fractionation and determination of the organic constituents of black liquors

AUTHOR(S): Monzie-Guillemet, D.; Raoux, H.; Monzie, P.

CORPORATE SOURCE: Fac. Sci., Bordeaux

SOURCE: Chim. Biochim. Lignine, Cellulose Hemicelluloses,
Actes Symp. Intern., Grenoble, France (1964)
191-211

DOCUMENT TYPE: Journal

LANGUAGE: French

SO Chim. Biochim. Lignine, Cellulose Hemicelluloses, Actes Symp. Intern.,
Grenoble, France (1964) 191-211

AB Determination of the polyosidic fraction of black liquor required elimination of

salts prior to hydrolysis. The method described reduces sugar losses and simplifies manipulations. The precipitation of hemicelluloses was found never to be quant., the degree of recovery varying from. . .

- IT Sugars
(analysis, chromatographic, for paper pulping kraft black liquor)
- IT Carbohydrates
(determination in paper pulping kraft black liquors and copptn. with lignin)
- IT Polysaccharides
(in paper pulping kraft black liquors and their determination)
- IT 124-38-9, Carbon dioxide 7783-06-4, Hydrogen sulfide
(H₂S)
(removal of, from paper pulping kraft black liquors)
- IT 64-19-7P, Acetic acid
RL: PREP (Preparation)
(separation from paper pulping kraft black liquor and determination of)

L3 ANSWER 60 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1966:430368 CAPLUS

DOCUMENT NUMBER: 65:30368

ORIGINAL REFERENCE NO.: 65:5656c-f

TITLE: Fundamental study of the chemistry of sulfate cooks.
I. Fractionation and quantitative determination of the components of black liquors

AUTHOR(S): Monzie-Guillemet, D.; Raoux, H.; Monzie, P.

SOURCE: Techniques et Recherches Papetieres (1966),
No. 7, 37-48

CODEN: TQRPAB; ISSN: 0372-1035

DOCUMENT TYPE: Journal

LANGUAGE: French

SO Techniques et Recherches Papetieres (1966), No. 7, 37-48

CODEN: TQRPAB; ISSN: 0372-1035

AB . . . of a kraft cook of pinewood contained 50-60 g./l. of lignin (I), which was approx. 10-15 times the amts. of polysaccharides present. The liquors also contained appreciable amts. of salts of organic acids. Whereas little space is devoted to I, the separation of which presented fewer difficulties, an attempt was made to determine quant. the carbohydrates and the organic acids present. The black liquor, brought to pH 3 at 20° by means of acid, yielded I as a precipitate that retained as much as 35-45% of the total polysaccharides, which apparently were copptd. Difficulties were experienced in removing salts from the black liquor, and the best method of removing. . . After filtering off the Amberlite and washing the residue, a filtrate was obtained that caused little precipitation of I or carbohydrates. I was removed from this filtrate by a mild chlorite bleach (at 20° for 18 hrs.) followed by precipitation with EtOH. In this way, the polysaccharides could be determined. However it was best to hydrolyze the filtrate + washings with aqueous H₂SO₄, and to sep. the individual sugars chromatographically, or to determine them completely by the Somogyi method (CA 46, 4955f). The organic acids were separated by treating. . . acid were determined by gas chromatography.

Various

saccharinic acids were also identified chromatographically. Apparently the copptn. of I and the carbohydrates is not due to an initial complex of these 2 wood components. 25 references.

- IT Sugars
(analysis, chromatographic, for paper pulping kraft black liquor)

- IT Carbohydrates
(determination in paper pulping kraft black liquors and copptn. with lignin)
- IT Polysaccharides
(in paper pulping kraft black liquors and their determination)
- IT 2554-46-3P, Pyrazol-5-ol, 4-mercapto-3-methyl-1-phenyl-, 4-carbamate
RL: PREP (Preparation)
(preparation of)
- IT 124-38-9, Carbon dioxide 7783-06-4, Hydrogen sulfide
(H₂S)
(removal of, from paper pulping kraft black liquors)
- IT 64-19-7P, Acetic acid
RL: PREP (Preparation)
(separation from paper pulping kraft black liquor and determination of)
- IT 64-18-6P, Formic acid
RL: PREP (Preparation)
(separation of, from paper pulping kraft black liquor and determination of)

L3 ANSWER 61 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1966:89790 CAPLUS

DOCUMENT NUMBER: 64:89790

ORIGINAL REFERENCE NO.: 64:16876h,16877a-b

TITLE: Energy transport in carbohydrates. III.
Chemical effects of γ -radiation on the
cycloamyloses

AUTHOR(S): Phillips, G. O.; Young, M.

CORPORATE SOURCE: Univ. Coll., Cardiff, UK

SOURCE: Journal of the Chemical Society [Section] A:
Inorganic, Physical, Theoretical (1966),
(4), 383-7

CODEN: JCSIAP; ISSN: 0022-4944

DOCUMENT TYPE: Journal

LANGUAGE: English

TI Energy transport in carbohydrates. III. Chemical effects of
 γ -radiation on the cycloamyloses

SO Journal of the Chemical Society [Section] A: Inorganic, Physical,
Theoretical (1966), (4), 383-7

CODEN: JCSIAP; ISSN: 0022-4944

AB . . . solid cyclohepta-amylose, there is rupture of the cyclic
 α -1 \rightarrow 4-glycosidic system which does not follow the pattern
of acid hydrolysis. No glucose is produced, and the products
formed initially are maltohexaose and gluconic acid. The gaseous products
are H₂, CO₂, . . . + 10-3M), there is a different distribution of
products, and cleavage of the cyclic system is more akin to acid
hydrolysis.

IT 526-95-4P, Gluconic acid 14541-36-7P, Carbon monoxide, dimethyl
mercaptole 34620-77-4P, Maltohexaose

RL: PREP (Preparation)

(formation of, from cycloheptaamylose by γ -irradiation)

IT 124-38-9P, Carbon dioxide

RL: PREP (Preparation)

(formation of, from cycloheptaamylose by γ -rays)

IT 1333-74-0P, Hydrogen

RL: PREP (Preparation)

(formation or evolution of, from cycloheptaamylose by
 γ -irradiation)

L3 ANSWER 62 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1965:474250 CAPLUS
 DOCUMENT NUMBER: 63:74250
 ORIGINAL REFERENCE NO.: 63:13737g,13738a-b
 TITLE: The accumulation of carbohydrate in
 Chlorella vulgaris under heterotrophic conditions
 AUTHOR(S): Griffiths, D. J.
 CORPORATE SOURCE: University Coll. North Wales, Bangor
 SOURCE: Annals of Botany (Oxford, United Kingdom) (1965), 29(115), 347-57
 CODEN: ANBOA4; ISSN: 0305-7364
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 TI The accumulation of carbohydrate in Chlorella vulgaris under
 heterotrophic conditions
 SO Annals of Botany (Oxford, United Kingdom) (1965), 29(115),
 347-57
 CODEN: ANBOA4; ISSN: 0305-7364
 AB . . . combined exts. were clarified, freed of EtOH, and their reducing
 power calculated as equivs. of glucose both before and after
hydrolysis with 0.4N H2SO4. The cell residues were
hydrolyzed with N H2SO4 at 100° for 3 hrs., and extracted with
 H2O for half an hr. Other portions of cell residues were held at
 100° 2 min. and then hydrolyzed with diastase 72 hrs. at
 30°. Both sets of exts. were analyzed for reducing sugars
 . Cells of the Emerson strain under heterotrophic conditions (illuminated
 on a glucose medium) accumulated much more carbohydrate than
 under autotrophic conditions (on a glucose medium without light). Much of
 this addnl. carbohydrate was in the form of starch and other
polysaccharides. The extent of the accumulation was not related
 to the size of the cells. The Brannon Number 1 strain also accumulated
 addnl. carbohydrate under heterotrophic conditions. This was
 shown by the 2 types of hydrolysis to be some
polysaccharide other than starch.
 IT Chlorella vulgaris
 (CO2 fixation by, effect of carbohydrates and light on)
 IT Chlorella vulgaris
 (carbohydrate formation by)
 IT Light
 (carbon dioxide fixation by Chlorella vulgaris
 after)
 IT Carbohydrates
Polysaccharides
 (formation of, by Chlorella vulgaris)
 IT 124-38-9, Carbon dioxide
 (fixation or metabolism of, by Chlorella vulgaris, effect of
carbohydrates and light on)
 IT 9005-25-8P, Starch
 RL: PREP (Preparation)
 (formation of, by Chlorella vulgaris)
 IT 56-41-7P, Alanine
 RL: PREP (Preparation)
 (formation of, by Chlorella vulgaris, light effect on)
 IT 56-87-1P, Lysine 74-79-3P, Arginine 6893-26-1P, D-Glutamic acid
 RL: PREP (Preparation)
 (formation of, in CO2 fixation by Chlorella vulgaris, light effect on)
 IT 79-14-1P, Glycolic acid
 RL: PREP (Preparation)

(formation of, in CO2 fixation by Chlorella vulgaris, light effect on)
IT 59-23-4, Galactose
(in carbon dioxide fixation by Chlorella vulgaris,
light in relation to)
IT 50-99-7, D-Glucose 57-48-7, Fructose
(in carbon dioxide metabolism by Chlorella
vulgaris, light in relation to)

L3 ANSWER 63 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1965:440921 CAPLUS
DOCUMENT NUMBER: 63:40921
ORIGINAL REFERENCE NO.: 63:7386h,7387a
TITLE: Metabolism of radioiodine by Chlorella vulgaris
AUTHOR(S): Anghileri, Leopoldo J.
SOURCE: Arg., Rep., Com. Nacl. Energia At., Inform. (
1965), No. 132, 11 pp.
DOCUMENT TYPE: Journal
LANGUAGE: Spanish

SO Arg., Rep., Com. Nacl. Energia At., Inform. (1965), No. 132, 11
pp.

AB . . . vulgaris in the light, more than half was present as
intracellular iodide. Labeled mono- and diiodotyrosine were identified in
the hydrolyzate of the protein material, along with a third
radioactive peak. Most of the isotope in the lipid material was found. .

IT Light
(carbon dioxide fixation by Chlorella vulgaris
after)

IT 124-38-9, Carbon dioxide
(fixation or metabolism of, by Chlorella vulgaris, effect of
carbohydrates and light on)

IT 27380-65-0P, Tyrosine, iodo- 28553-48-2P, Tyrosine, diiodo-
RL: PREP (Preparation)
(formation of, by Chlorella vulgaris)

IT 59-23-4, Galactose
(in carbon dioxide fixation by Chlorella vulgaris,
light in relation to)

IT 50-99-7, D-Glucose 57-48-7, Fructose
(in carbon dioxide metabolism by Chlorella
vulgaris, light in relation to)

L3 ANSWER 64 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1965:25848 CAPLUS
DOCUMENT NUMBER: 62:25848
ORIGINAL REFERENCE NO.: 62:4646e-g
TITLE: Acidoid behavior of charcoal as a function of its
oxygen complexes. VI. Adsorption of ammonia
AUTHOR(S): Puri, Balwant Rai; Mahajan, O. P.
SOURCE: J. Indian Chem. Soc. (1964), 4(8), 586-90
DOCUMENT TYPE: Journal
LANGUAGE: English

SO J. Indian Chem. Soc. (1964), 4(8), 586-90

AB The effect of the nature of the surface of sugar charcoal on the
adsorption of ammonia in solution or the gaseous phase was investigated. The
surface of the charcoal was. . . 2 distinct reactions. The first
reaction is neutralization involving an acidic CO2 complex. The adsorbed
NH3 can be recovered on hydrolysis with HCl or NaOH. The 2nd

reaction involves the fixation of N in a non-hydrolyzable form and cannot be attributed to any surface group postulated thus far. Both reactions are temperature dependent.

IT 121-44-8P, Triethylamine 124-40-3P, Dimethylamine

RL: PREP (Preparation)

(adsorption by charcoal, acidic CO2 surface complex formation and)

IT 7664-41-7P, Ammonia

RL: PREP (Preparation)

(adsorption of, by charcoal, CO2 acidic surface complex formation and)

IT 109-73-9P, Butylamine 109-89-7P, Diethylamine

RL: PREP (Preparation)

(adsorption of, by charcoal, acidic CO2 surface complex formation and)

IT 124-38-9, Carbon dioxide

(complex (acidic surface), with charcoal, NH3 adsorption and)

L3 ANSWER 65 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1964:442243 CAPLUS

DOCUMENT NUMBER: 61:42243

ORIGINAL REFERENCE NO.: 61:7379e-f

TITLE: Effect of potassium on efflux of assimilates and carbohydrate metabolism in wheat shoots

AUTHOR(S): Leont'eva, A. N.

SOURCE: Uch. Zap., Gor'kovsk. Gos. Univ. (1963), (63), 82-5

From: Ref. Zh., Biol. 1964, Abstr. No. 6G40.

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI Effect of potassium on efflux of assimilates and carbohydrate metabolism in wheat shoots

SO Uch. Zap., Gor'kovsk. Gos. Univ. (1963), (63), 82-5
From: Ref. Zh., Biol. 1964, Abstr. No. 6G40.

AB . . . 20 min. The above -ground parts and the roots were fixed sep. after exposure to light for 30 min. Free sugars were separated chromatographically and radioactivity was determined. The efflux of assimilates into the roots of plants receiving K was more. . . content of labeled monosaccharides in the roots as the result of consumption of sucrose by respiration, secondary synthetic processes, and hydrolysis. The fact that the amount of incorporated 14C was highest in the 24-hr. hydrolysis fraction indicates that the rate of protein synthesis was increased. K resulted in an increase in the radioactivity of the. .

IT Wheat

(carbon dioxide metabolism by, K effect on)

IT Sugars

(metabolism of, by wheat, K effect on)

IT 124-38-9, Carbon dioxide

(fixation or metabolism of, by wheat, K effect on)

IT 57-50-1P, Sucrose

RL: PREP (Preparation)

(formation of, by wheat, K effect on)

IT 9004-34-6P, Cellulose

RL: PREP (Preparation)

(formation of, in wheat, K effect on)

IT 7440-09-7, Potassium

(in carbon dioxide fixation by wheat)

L3 ANSWER 66 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1964:412136 CAPLUS
DOCUMENT NUMBER: 61:12136
ORIGINAL REFERENCE NO.: 61:2047e-g
TITLE: A comparative study of the pulps obtained from okoume wood and various commercial pulps, as well as changes occurring on aging
AUTHOR(S): Savard, J.; Andre, A. M.
CORPORATE SOURCE: Div. Chim. Centre Tech. Forestier Trop., Nogent-sur-Marne, Fr.
SOURCE: Assoc. Tech. Ind. Papetiere, Bull (1963), 17(5), 322-36
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

SO Assoc. Tech. Ind. Papetiere, Bull (1963), 17(5), 322-36
AB . . . an unbleached bisulfite pulp was also bleached with ClO₂ to 89% brightness. Analyses were made on all pulps for extractives, sugars determined chromatographically after hydrolysis, cellulose (according to Kuerschner, followed by a correction), Klason lignin, and reducing values obtained by Bertrand's method. Summations (of selected. . . amount of CO₂ released in the Le Fevre-Tollens reaction that did not originate from the uronic acid or from the sugars formed on hydrolysis increased markedly on aging.
IT 124-38-9P, Carbon dioxide
RL: PREP (Preparation)
(formation of, in paper pulps from Aucoumea wood on aging)

L3 ANSWER 67 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1964:77052 CAPLUS
DOCUMENT NUMBER: 60:77052
ORIGINAL REFERENCE NO.: 60:13583h,13584a-d
TITLE: Distribution of ¹⁴C and its incorporation into fructose polymers after photosynthesis by Helianthus tuberosus
AUTHOR(S): Popov, K.; Edelman, Dzh.
SOURCE: Izv. Inst. po Biol. "Metodii Popov" Bulgar. Akad. Nauk. (1963), 13, 37-61
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
SO Izv. Inst. po Biol. "Metodii Popov" Bulgar. Akad. Nauk. (1963), 13, 37-61
AB . . . min., and the extract concentrated to a small volume Radioactivity is determined
by planchet counting, autoradiographs, and identification of the sugars and fructose polymers after paperchromatographic separation About 70% of the total activity is recovered in the extract (approx. 12,200,000 counts/min.),. . . phloem contain very little of higher labeled fructosides, but labeled sucrose is well distributed. The incorporation of newly synthesized ¹⁴C-labeled sugars of the fructose polymers was studied after acid and enzymic hydrolysis of the tuber extract For acid hydrolysis the extract was heated with oxalic acid (one part extract with 9 parts of 5.5% oxalic acid) and for the enzymic hydrolysis with a tuber preparation of β, β fructofuranosidase, which catalyzes the cleavage of the fructose-fructose bond without affecting the glucose-fructose bond. The enzyme was obtained in 0.5% yield from tubers kept in moist sand at 2° for 6 weeks. Complete hydrolysis of the tri-, tetra-, and hexasaccharides was obtained after incubation for 15-20 hrs. After enzymic hydrolysis

, the intramol. distribution of ^{14}C was found mainly in sucrose. The enzymic hydrolysis of the active pentasaccharides results in the liberation of active glucose sucrose fructose, and small amts. of active tri- and. . .

IT 124-38-9P, Carbon dioxide

RL: PREP (Preparation)

(fixation or metabolism of, by Jerusalem artichoke, fructoside formation and)

IT 9005-80-5P, Inulin

RL: PREP (Preparation)

(formation of, by Jerusalem artichoke during photosynthesis)

IT 57-50-1P, Sucrose

RL: PREP (Preparation)

(formation of, by Jerusalem artichoke, CO_2 in)

IT 57-48-7P, Fructose

RL: PREP (Preparation)

(polymers of, formation by Jerusalem artichoke, CO_2 in)

L3 ANSWER 68 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1964:53563 CAPLUS

DOCUMENT NUMBER: 60:53563

ORIGINAL REFERENCE NO.: 60:9468c-e

TITLE: Effect of gamma irradiation upon cellulose

AUTHOR(S): Horio, Masao; Imamura, Rikizo; Mizukami, Hideya

CORPORATE SOURCE: Univ. Kyoto, Japan

SOURCE: Bulletin of the Institute for Chemical Research, Kyoto University (1963), 41(1), 17-38

CODEN: BICRAS; ISSN: 0023-6071

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

SO Bulletin of the Institute for Chemical Research, Kyoto University (1963), 41(1), 17-38

CODEN: BICRAS; ISSN: 0023-6071

AB . . . a considerable amount of formic acid ester was found in the irradiated samples. The paper chromatographic analysis showed that the hydrolyzate of strongly irradiated cellulose contains an appreciable amount of xylose, arabinose, and glucuronic acid besides glucose, which suggested the transformation of carbohydrate components by the irradiation. Hypothetic formulas were given for the transformation.

IT 6556-12-3P, Glucuronic acid

RL: PREP (Preparation)

(formation of ascorbic acid and xylulose from, in cellulose by γ -irradiation)

IT 14541-36-7P, Carbon monoxide, dimethyl mercaptole

RL: PREP (Preparation)

(formation of, from cellulose (deuterated) by γ -irradiation)

IT 124-38-9P, Carbon dioxide

RL: PREP (Preparation)

(formation of, from cellulose (deuterated) by γ -rays)

IT 147-81-9P, Arabinose

RL: PREP (Preparation)

(formation of, from cellulose by γ -rays)

IT 74-82-8P, Methane

RL: PREP (Preparation)

(formation of, from deuterated cellulose by γ -irradiation)

IT 50-99-7P, D-Glucose

RL: PREP (Preparation)
 (formation of, in cellulose by γ -irradiation)

IT 58-86-6P, Xylose

RL: PREP (Preparation)
 (formation of, in cellulose by γ -rays)

L3 ANSWER 69 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1964:24971 CAPLUS

DOCUMENT NUMBER: 60:24971

ORIGINAL REFERENCE NO.: 60:4466g-h, 4467a

TITLE: Distribution of carbon-14 in polysaccharide after photosynthesis in carbon dioxide labeled with carbon-14 by Anacystis nidulans

AUTHOR(S): Kindel, Paul; Gibbs, Martin

CORPORATE SOURCE: Cornell Univ., Ithaca, NY

SOURCE: Nature (London, United Kingdom) (1963), 200(4903), 260-1
 CODEN: NATUAS; ISSN: 0028-0836

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI Distribution of carbon-14 in polysaccharide after photosynthesis in carbon dioxide labeled with carbon-14 by Anacystis nidulans

SO Nature (London, United Kingdom) (1963), 200(4903), 260-1
 CODEN: NATUAS; ISSN: 0028-0836

AB . . . ml. of boiling 90% EtOH. The solid material was extracted with absolute EtOH, 20% EtOH, and H₂O. The residue was hydrolyzed with N HCl for 1.5 hrs. at 100°. The neutralized solution was chromatographed and the effluent evaporated and streaked on. . . C-3 = 86, C-4 = 100, C-5 = 14, C-6 = 18. The pattern of distribution of ¹⁴C in glucose polysaccharide isolated from both algae was identical at any given time. These results suggest that aldolase is present in algae but is not detected, aldolase is not involved in the conversion of CO₂ to carbohydrate during photosynthesis, different mechanisms of assimilation of CO₂ may exist in both organisms but give rise to the same ¹⁴C. . .

IT Polysaccharides
 (formation of, by Anacystis nidulans and Chlorella pyrenoidosa during photosynthesis)

IT Anacystis nidulans
 Chlorella pyrenoidosa
 (polysaccharide formation by, during photosynthesis)

IT 124-38-9P, Carbon dioxide

RL: PREP (Preparation)
 (fixation or metabolism of, by Anacystis nidulans and Chlorella pyrenoidosa, polysaccharide formation in relation to)

L3 ANSWER 70 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1963:476721 CAPLUS

DOCUMENT NUMBER: 59:76721

ORIGINAL REFERENCE NO.: 59:14304b-c

TITLE: Biochemistry and physiology of galegine in Galega officinalis. III. Arginine as precursor of galegine in G. officinalis

AUTHOR(S): Reuter, G.

CORPORATE SOURCE: Deut. Akad. Wiss., Halle, Germany
 SOURCE: Arch. Pharm. (1963), 296(8), 516-22
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 SO Arch. Pharm. (1963), 296(8), 516-22
 AB . . . results indicate that the amidine group of the arginine is transferred as a unit to a preliminary stage of galegine.
Hydrolytic degradation of the galegine mol. confirms that after application of arginine-amidine-C14 almost the entire radioactivity was found in the amidine. . .
 IT 124-38-9P, Carbon dioxide
 RL: PREP (Preparation)
 (fixation or metabolism of, by clover and primrose, carbohydrate formation in relation to)
 IT 543-83-9P, Galegine
 RL: PREP (Preparation)
 (formation of from arginine by Galega officinalis, arginine in)
 IT 74-79-3P, Arginine 124-38-9P, Carbon dioxide
 RL: PREP (Preparation)
 (in galegine formation by Galega officinalis)

L3 ANSWER 71 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1963:464179 CAPLUS
 DOCUMENT NUMBER: 59:64179
 ORIGINAL REFERENCE NO.: 59:11896g-h,11897a
 TITLE: Evidence for a polymeric intermediate in cellulose biosynthesis
 AUTHOR(S): Mortimer, D. C.
 CORPORATE SOURCE: Natl. Res. Council, Ottawa
 SOURCE: Canadian Journal of Botany (1963), 41(7), 995-1004
 CODEN: CJBOAW; ISSN: 0008-4026
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

SO Canadian Journal of Botany (1963), 41(7), 995-1004
 CODEN: CJBOAW; ISSN: 0008-4026

AB Results of expts. on C14O2 assimilation by the leaves of sugar beet (Beta vulgaris) and barley (Hordeum vulgare) plants growing in soil are given. A 2-min. photosynthetic period was used. Most. . . in a glucosan (II) sufficiently polymerized to precipitate readily and irreversibly from solution The radioactive II is resistant to acid hydrolysis but is readily hydrolyzed by cellulase. While the total radioactivity of the I fraction does not further increase 10 min. after contact with C14O2. . .

IT Barley
Sugar beets
 (carbon dioxide fixation by, cellulose formation and)

IT 124-38-9P, Carbon dioxide
 RL: PREP (Preparation)
 (fixation or metabolism of, by barley and sugar beets, cellulose formation in relation to)

IT 9004-34-6P, Cellulose
 RL: PREP (Preparation)
 (formation of, by barley and sugar beet, glucosan in)

L3 ANSWER 72 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1963:48246 CAPLUS
 DOCUMENT NUMBER: 58:48246
 ORIGINAL REFERENCE NO.: 58:8239a-c
 TITLE: Biosynthesis of C14-labeled inulin and fructose-1,6-C14
 AUTHOR(S): Zhemchuzhina, A. V.
 SOURCE: Metody Polucheniya Radioaktivnykh Preparatov (1962) 70-4
 CODEN: 13BRAU
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 SO Metody Polucheniya Radioaktivnykh Preparatov (1962) 70-4
 CODEN: 13BRAU
 AB . . . 0.17-0.27, μ c./mg. and the yield 2.5% with reference to C14O2. The fructose-1,6-C14 was obtained as follows: 3 g. inulin was hydrolyzed for 20 min. in 20 ml. 0.1N H2SO4 at 80°; the solution was neutralized with a cation-exchange resin, evaporated to. . .
 50% with reference to inulin and 1% based on C14O2. The dahlia leaves contained very small amts. of the labeled carbohydrates.
 IT 124-38-9P, Carbon dioxide
 RL: PREP (Preparation)
 (fixation or metabolism of, by dahlias, fructose and inulin formation in relation to)
 IT 5160-37-2P, Fructose-1,6-14C2, D-
 RL: PREP (Preparation)
 (formation in dahlias)
 IT 9005-80-5P, Inulin
 RL: PREP (Preparation)
 (labeled with 14C, formation in dahlias)
 L3 ANSWER 73 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1962:485982 CAPLUS
 DOCUMENT NUMBER: 57:85982
 ORIGINAL REFERENCE NO.: 57:17204h-i,17205a-b
 TITLE: Fate of diethyl pyrocarbonate in wine
 AUTHOR(S): Thoukis, George; Bouthilet, R. J.; Ueda, Mas; Caputi, Arthur, Jr.
 CORPORATE SOURCE: E. & J. Gallo Winery, Modesto, CA
 SOURCE: Am. J. Enol. Viticult. (1962), 13, 105-13
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 SO Am. J. Enol. Viticult. (1962), 13, 105-13
 AB The addition of (Et2OC14)2O (I) to water led to complete hydrolysis to EtOH and CO2, but in wine at pH 3.3 only 97-98% of the C14O2 was recoverable as volatile material.. . . stable in wine at pH 3.3 but not at pH 1.0 may be the result of the formation of a hydrolyzable complex with constituents similar to tannic acid or the formation of Et carbamate from NH4+. Organic acids, sugars, EtOH, amino acids, or higher alcs. do not appear to be involved in production of such a residue from I. . .
 IT 124-38-9P, Carbon dioxide
 RL: PREP (Preparation)
 (formation of, from diethyl pyrocarbonate decomposition in wine)
 IT 64-17-5P, Ethyl alcohol
 RL: PREP (Preparation)
 (formation of, in diethyl pyrocarbonate decomposition in wine)

IT 4596-51-4P, Glycine, N-carboxy-, N-ethyl ester

RL: PREP (Preparation)
(preparation of)

L3 ANSWER 74 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1962:80977 CAPLUS

DOCUMENT NUMBER: 56:80977

ORIGINAL REFERENCE NO.: 56:15839d-f

TITLE: Effects of internal and external factors on
photosynthetic C14O2 fixation in general and on
formation of maltose-C14 in Acer leaf in particular

AUTHOR(S): Nishida, K.

CORPORATE SOURCE: Univ. Kanazawa, Japan

SOURCE: Physiologia Plantarum (1962), 15, 47-58

CODEN: PHPLAI; ISSN: 0031-9317

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

SO Physiologia Plantarum (1962), 15, 47-58

CODEN: PHPLAI; ISSN: 0031-9317

AB . . . CA 54, 3590b. When light of high intensity was applied to rice
leaves, C14 was incorporated predominantly in sucrose and sugar
phosphates and less in amino and organic acids than when placed under weaker
light. Addition of NH4NO3 to the nutrient. . . In younger leaves C14 was
mainly in the amino acids, especially alanine, whereas in older leaves it went
mostly into sugars. In maple leaves maltose accounted for 20%
of the total activity within 5 min. In terms of leaf age maltose was
highest in the oldest leaves. There was evidence that maltose was formed,
not through starch hydrolysis, but by a direct pathway.

IT Maple
Rice

(carbon dioxide fixation in, light intensity and)

IT 124-38-9, Carbon dioxide

(fixation or metabolism of, by maple and rice, light intensity in
relation to)

IT 69-79-4P, Maltose

RL: PREP (Preparation)

(formation of, in maple leaves, light intensity in relation to)

L3 ANSWER 75 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1962:62473 CAPLUS

DOCUMENT NUMBER: 56:62473

ORIGINAL REFERENCE NO.: 56:12017f-i

TITLE: The incorporation of carbon-14 into cellulose and
other polysaccharides of sugar
beet leaf during short-term photosynthesis in
carbon dioxide-C14

AUTHOR(S): Mortimer, D. C.; Wylam, Clare B.

CORPORATE SOURCE: Natl. Research Council, Ottawa, Can.

SOURCE: Canadian Journal of Botany (1962), 40, 1-11

CODEN: CJBOAW; ISSN: 0008-4026

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI The incorporation of carbon-14 into cellulose and other
polysaccharides of sugar beet leaf during short-term
photosynthesis in carbon dioxide-C14

SO Canadian Journal of Botany (1962), 40, 1-11

CODEN: CJBOAW; ISSN: 0008-4026

AB A scheme is given for fractionation of the carbohydrates of sugar beet leaves in EtOH, water, and 3 concns. of KOH. Quant. hydrolysis of polysaccharides (I) from the water- and alkaline-soluble fractions gave galactose (II), glucose (III), arabinose (IV), xylose (V), ribose (VI), and rhamnose. . . that in cellulose after 10 sec., but similar in both fractions after longer periods. All of the radioactivity in the carbohydrates was in the III, except for some in the fructose (VIII) of sucrose (IX). When photosynthesis in C1402 was followed. . . monosaccharides, IV was the most abundant, while II, V, VI, and VII constituted only a minor part of the total carbohydrates. Starch appeared to be present in the water-soluble fraction. Hemicellulose fractions are discussed. Sugars isolated from the I of plum and oat leaves are considered. 20 references.

IT Polysaccharides

(formation of, by sugar beet leaf during short term photosynthesis)

IT Sugar beets

(polysaccharide formation by leaf of, during short term photosynthesis)

IT 124-38-9P, Carbon dioxide

RL: PREP (Preparation)

(fixation or metabolism of, by sugar beet leaf, polysaccharide formation in short term photosynthesis in)

IT 50-69-1P, Ribose 57-48-7P, Fructose 57-50-1P, Sucrose 58-86-6P, Xylose 59-23-4P, Galactose

RL: PREP (Preparation)

(formation of, by sugar beet leaf during short-term photosynthesis)

IT 9004-34-6P, Cellulose

RL: PREP (Preparation)

(formation of, in sugar beet leaf during short term photosynthesis)

IT 147-81-9P, Arabinose 3615-41-6P, Rhamnose

RL: PREP (Preparation)

(formation of, in sugar beet leaf during short-term photosynthesis)

L3 ANSWER 76 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1962:20530 CAPLUS

DOCUMENT NUMBER: 56:20530

ORIGINAL REFERENCE NO.: 56:3910c-d

TITLE: Physiological studies of the rumen protozoan
Ophryoscolex caudatus

AUTHOR(S): Williams, P. P.; Davis, R. E.; Doetsch, R. N.;
Gutierrez, J.

CORPORATE SOURCE: U.S. Dept. of Agr., Beltsville, MD, USA

SOURCE: Applied Microbiology (1961), 9, 405-10

CODEN: APMBAY; ISSN: 0003-6919

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

SO Applied Microbiology (1961), 9, 405-10

CODEN: APMBAY; ISSN: 0003-6919

AB . . . products formed from starch included AcOH, butyric acid, lactic acid, CO₂, and H₂. Cellulose was not attacked, although pectin was hydrolyzed. The protozoan used cottonseed, soybean, and linseed oil meals, DL-alanine, DL-valine, and DL-leucine with ammonia N as a metabolic product. The rapid breakdown of starch by O. caudatus indicates

that the protozoa may influence the digestion of the polysaccharide in the rumen.

IT 50-21-5P, Lactic acid 64-19-7P, Acetic acid 107-92-6P, Butyric acid 124-38-9P, Carbon dioxide

RL: PREP (Preparation)

(formation of, in starch metabolism by Ophryoscolex caudatus)

IT 1333-74-0P, Hydrogen

RL: PREP (Preparation)

(formation or evolution of, in starch metabolism by Ophryoscolex caudatus)

L3 ANSWER 77 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1960:98901 CAPLUS

DOCUMENT NUMBER: 54:98901

ORIGINAL REFERENCE NO.: 54:18797b-d

TITLE: Some aspects of carbohydrate metabolism of cultural forms of Trypanosoma cruzi

AUTHOR(S): Raw, Isaias

CORPORATE SOURCE: Fac. med. univ. Sao Paulo, Brazil

SOURCE: Revista do Instituto de Medicina Tropical de Sao Paulo (1959), 1, 192-4

CODEN: RMTSAE; ISSN: 0036-4665

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI Some aspects of carbohydrate metabolism of cultural forms of Trypanosoma cruzi

SO Revista do Instituto de Medicina Tropical de Sao Paulo (1959), 1, 192-4

CODEN: RMTSAE; ISSN: 0036-4665

IT Trypanosoma cruzi

(carbohydrate metabolism in)

IT Enzymes

(gluconic acid 6-phosphate-hydrolyzing, in Trypanosoma cruzi)

IT Carbohydrates

(metabolism of, by Trypanosoma cruzi)

IT 50-21-5P, Lactic acid

RL: PREP (Preparation)

(derivs., formation of, in gluconic acid 6-phosphate metabolism by Trypanosoma cruzi)

IT 124-38-9, Carbon dioxide

(fixation or metabolism of, by Trypanosoma cruzi)

L3 ANSWER 78 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1957:11033 CAPLUS

DOCUMENT NUMBER: 51:11033

ORIGINAL REFERENCE NO.: 51:2313a-c

TITLE: Structure of the amino sugar derived from streptothricin and streptolin B

AUTHOR(S): Van Tamelen, Eugene E.; Dyer, John R.; Carter, Herbert E.; Pierce, Jack V.; Daniels, Edward E.

CORPORATE SOURCE: Univ. of Wisconsin, Madison

SOURCE: Journal of the American Chemical Society (1956), 78, 4817-18

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI Structure of the amino sugar derived from streptothricin and

streptolin B

SO Journal of the American Chemical Society (1956), 78, 4817-18
CODEN: JACSAT; ISSN: 0002-7863

AB cf. C.A. 48, 5106h. Acid hydrolysis of streptothricin and streptolin B yielded, among other products, CO₂, NH₂, L-β-lysine, streptolidine, and a strongly reducing substance (I) HCl. . .

IT Sugars
(amino, of streptolin B and streptothricin)

IT Gulopyranose, 2-amino-1,6-anhydro-2-deoxy-, hydrochloride
RL: PREP (Preparation)
(formation from 2-amino-2-deoxy-α-D-gulose)

IT 1404-71-3, Streptolin B 54003-27-9, Streptothricin
(amino sugar of)

IT 112599-89-0P, Gulopyranose, 2-amino-1,6-anhydro-2-deoxy-, β-D-
RL: PREP (Preparation)
(formation from 2-amino-2-deoxy-α-D-gulose)

IT 504-21-2P, Hexanoic acid, 3,6-diamino-, L- 29307-61-7P, Streptolidine
RL: PREP (Preparation)
(formation from hydrolysis of streptolin B and streptothricin)

IT 72904-60-0P, Gulose, 2-amino-2-deoxy-, D-
RL: PREP (Preparation)
(formation from hydrolysis of streptolin B and streptothricin, and hydrochloride)

IT 124-38-9P, Carbon dioxide 7664-41-7P, Ammonia
RL: PREP (Preparation)
(formation of, from hydrolysis of streptolin B and streptothricin)

IT 280-16-0, 6,8-Dioxabicyclo[3.2.1]octane
(sugar derivs.)

L3 ANSWER 79 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1956:82966 CAPLUS

DOCUMENT NUMBER: 50:82966

ORIGINAL REFERENCE NO.: 50:15720d-f

TITLE: The effect of carbon dioxide on polysaccharide production by Streptococcus bovis

AUTHOR(S): Dain, Joel A.; Neal, A. L.; Seeley, H. W.

CORPORATE SOURCE: Cornell Univ., Ithaca, NY

SOURCE: Journal of Bacteriology (1956), 72, 209-13
CODEN: JOBAAY; ISSN: 0021-9193

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI The effect of carbon dioxide on polysaccharide production by Streptococcus bovis

SO Journal of Bacteriology (1956), 72, 209-13
CODEN: JOBAAY; ISSN: 0021-9193

AB . . . medium and incubation of the plates anaerobically. The CO₂-dependent slime from 1 strain was purified and identified as a glucose-containing polysaccharide by paper chromatography of the hydrolyzate. Slime formation may be concerned with the development of bloat in ruminants.

IT Polysaccharides
(formation of, by Streptococcus bovis, CO₂ effect on)

IT Streptococcus bovis
(slime polysaccharide formation by, CO₂ effect on)

IT 124-38-9P, Carbon dioxide
RL: PREP (Preparation)
(effect on polysaccharide formation by Streptococcus bovis)

L3 ANSWER 80 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1955:40578 CAPLUS

DOCUMENT NUMBER: 49:40578

ORIGINAL REFERENCE NO.: 49:7759e-i

TITLE: Carbohydases of insects. I. Distribution of
carbohydases in several insects

AUTHOR(S): Koike, Hisayoshi

SOURCE: Dobutsugaku Zasshi (1954), 63, 228-34

CODEN: DOZAAK; ISSN: 0044-5118

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

SO Dobutsugaku Zasshi (1954), 63, 228-34

CODEN: DOZAAK; ISSN: 0044-5118

AB The carbohydases of several insects were investigated by detecting the
reducing sugars produced from di-, tri-, or
polysaccharides with paper chromatography. In adzuki bean weevil
pupae, Callosobruchus chinensis, α -glucosidase, β -fructosidase
(I), and α -galactosidase were strongly evident and
 β -glucosidase. . .

IT Narcosis

(carbon dioxide-induced, electrolytes in blood in
mental disease after)

IT 585-99-9P, Melibiose

RL: PREP (Preparation)

(formation of, from raffinose in insects)

IT 512-69-6, Raffinose

(hydrolysis of, by enzymes in insects)

L3 ANSWER 81 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1955:36538 CAPLUS

DOCUMENT NUMBER: 49:36538

ORIGINAL REFERENCE NO.: 49:7067d-h

TITLE: Use of radiosugars in the study of
carbohydrate metabolism of the leaf

AUTHOR(S): Porter, Helen K.; May, L. H.

CORPORATE SOURCE: Imperial Coll. Sci., London

SOURCE: Proc. 2nd Radioisotope Conf., Oxford, I, Med. and
Physiol. Applications (1954) 351-9

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI Use of radiosugars in the study of carbohydrate metabolism of
the leaf

SO Proc. 2nd Radioisotope Conf., Oxford, I, Med. and Physiol. Applications (
1954) 351-9

AB . . . and disks 1 cm. in diameter cut from the leaves and placed in
Warburg flasks with 1 ml. of 5% sugar solns. containing 4 μ c. of
C14. The sugars supplied included uniformly labeled glucose and
fructose and sucrose with either the glucose or fructose moiety labeled.
The disks were. . . for analysis of disks and external solns. after 0,
8, 16, and 24 hrs. The mean specific activities of the
carbohydrates isolated from the disks and of the CO2 evolved
remained the same throughout. This showed that at least after 8 hrs. a
steady state has been established between entry of sugar and

redistribution of labeling. The results support the postulation that sugar enters the cell through a barrier into a site of metabolic activity and after crossing a second barrier emerges into. . . to be derived from the common hexose pool. When asymmetrically labeled sucrose was fed there was a large accumulation of sugar, predominantly hexose, in which no exchange of label between fructose and glucose had occurred; apparently when high concns. of sugar are applied some sucrose passes unchanged across the cytoplasm into the vacuole where it becomes partially hydrolyzed. Since starch formation from sucrose was much less than that from hexoses, it must be assumed that the rate of. . . of hexose, and that respiratory demands take precedence over starch synthesis, since CO₂ output was unaffected by the type of sugar fed.

- IT Plant cells
(carbohydrate metabolism in cytoplasm of)
- IT Tobacco
(carbohydrate metabolism in leaf disks of, radiosugars in study of)
- IT Metabolism, plant
(carbohydrate, radiosugars in study of)
- IT Hexoses
(carbon dioxide and starch formation from, in leaves)
- IT Sugars
(transfer of, across cell barriers in tobacco leaves)
- IT 14762-75-5, Carbon, isotope of mass 14
(as indicator, of sugar utilization in leaves)
- IT 9005-25-8P, Starch
RL: PREP (Preparation)
(formation of, in tobacco leaves)

L3 ANSWER 82 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1955:9867 CAPLUS

DOCUMENT NUMBER: 49:9867

ORIGINAL REFERENCE NO.: 49:2021i,2022a-e

TITLE: The biochemical activity of some microorganisms of pulque

AUTHOR(S): Sanchez-Marroquin, A.

SOURCE: Mem. Congr. Cient. Mex., IV Centenario Univ. Mex. (1953), 2, 471-84

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

SO Mem. Congr. Cient. Mex., IV Centenario Univ. Mex. (1953), 2, 471-84

AB . . . which could produce in high concns. of sucrose, a sirup with 2500 centipoises. This sirup has a high concentration of sugar, is highly stable, and has a high viscosity which makes it especially well suited for use in the manufacture of. . . of the sucrose by S. carbajali. This yeast is worthy of consideration in industrial fermentations. It can ferment molasses, and hydrolyzed rice and corn starches to yield 79.19-89.6% EtOH. It can ferment raffinose but not melibiose. It can fix CO₂ after. . .

IT Torulopsis hydromelitis

RL: PREP (Preparation)

(in manufacture of dried yeast from pulque)

IT 64-17-5P, Ethyl alcohol 64-19-7P, Acetic acid 124-38-9P,

Carbon dioxide

RL: PREP (Preparation)
 (formation of, by micro organisms of pulque)
 IT 50-21-5P, Lactic acid
 RL: PREP (Preparation)
 (formation of, by pulque micro organisms)
 IT 9004-54-0P, Dextran
 RL: PREP (Preparation)
 (formation of, from aguamiel by Leuconostoc)
 IT 69-65-8P, Mannitol
 RL: PREP (Preparation)
 (formation of, from fructose by Leuconostoc)

L3 ANSWER 83 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1955:6633 CAPLUS
 DOCUMENT NUMBER: 49:6633
 ORIGINAL REFERENCE NO.: 49:1354e-h
 TITLE: Working up solutions from the hydrolysis of
 cellulose containing materials rich in pentosans
 INVENTOR(S): Moldenhauer, Otto; Lechner, Richard
 PATENT ASSIGNEE(S): Phrix-Werke Akt. Ges.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	DE 824932		19511213	DE 1949-P45430	19490610 <--
TI	Working up solutions from the <u>hydrolysis</u> of cellulose containing materials rich in pentosans				
PI	DE 824932	<u>19511213</u>			
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	DE 824932		19511213	DE 1949-P45430	19490610 <--
AB	The solns. are concentrated by evaporation until the amount of reducible <u>sugar</u> constituents (I) is 15-40% by weight. The hexoses are then converted to alc. by fermentation and the residual solution is. . . fermentation by molds or similar fungi. A concentration of 20-35% (2.5-8% hexose) is particularly suitable for the fermentation process. A pre- <u>hydrolyzate</u> (7500 l.) from straw (4% I containing 20% hexoses and 80% pentoses) is neutralized with Na ₂ CO ₃ and then vacuum evaporated. . .				
IT	Pentosans (<u>hydrolysis</u> products of cellulose materials rich in, treatment of)				
IT	58-86-6, Xylose (from cellulosic-material (pentosan-rich) <u>hydrolysis</u> products)				
IT	64-17-5, Ethyl alcohol (from <u>hydrolysis</u> products of pentosanrich cellulose materials)				
IT	9004-34-6, Cellulose (<u>hydrolysis</u> of, rich in pentosan, treatment of products from)				
IT	71-36-3P, Butyl alcohol RL: <u>PREP (Preparation)</u> (manufacture by fermentation, of <u>hydrolysis</u> products of pentosanrich cellulose materials)				
IT	67-64-1P, Acetone 98-01-1P, 2-Furaldehyde				

RL: PREP (Preparation)
(manufacture of, from hydrolysis products of pentosanrich cellulose materials)

IT 1333-74-0P, Hydrogen
RL: PREP (Preparation)
(mixts. with CO₂, manufacture from hydrolysis product of pentosan-rich cellulose material)

IT 124-38-9P, Carbon dioxide
RL: PREP (Preparation)
(mixts. with H, manufacture from hydrolysis products of pentosan-high cellulose materials)

L3 ANSWER 84 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1954:72630 CAPLUS
DOCUMENT NUMBER: 48:72630
ORIGINAL REFERENCE NO.: 48:12929g-i
TITLE: Photosynthesis by sugar cane fed radioactive carbon dioxide
AUTHOR(S): Hartt, Constance E.; Burr, G. O.
CORPORATE SOURCE: Hawaiian Sugar Planters' Assoc., Honolulu
SOURCE: Proc. Intern. Botan. Congr., Stockholm, 1950 (1954), Volume Date 1953, 7, 748
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

TI Photosynthesis by sugar cane fed radioactive carbon dioxide
SO Proc. Intern. Botan. Congr., Stockholm, 1950 (1954), Volume Date 1953, 7, 748

AB The chief products of dark fixation of CO₂ by the sugar cane plant are found in the NH₄ oxalate extract, which is comprised chiefly of pectic substances. Other fractions radioactive after exposure in the dark included the alc. extract, the water extract, and lignin. The acid hydrolyzate became radioactive after 5 sec. and cellulose after 15 sec. Glucose had the highest specific activity of the 3 sugars (glucose, fructose, and sucrose) isolated, and gained in radioactivity before there was any gain in sucrose. At 10 sec., 100% of the gain in sugars was due to glucose plus fructose, while at 5 min. 80% of the gain was due to sucrose. Sucrose is a storage product; its formation starts at about the same time as that of the acid-hydrolyzable pentosans and cellulose.

IT Photosynthesis
(by sugar cane fed radioactive CO₂)

IT Pectic substances
(formation in sugar cane, photosynthesis in)

IT Pentosans
(in sugar cane, photosynthesis and)

IT Sugar cane
(photosynthesis in)

IT 14762-75-5, Carbon, isotope of mass 14
(as indicator, of CO₂ fixation by sugar cane)

IT 124-38-9P, Carbon dioxide
RL: PREP (Preparation)
(formation of, from chloroplast in dark)

IT 9004-34-6P, Cellulose 9005-53-2P, Lignin
RL: PREP (Preparation)
(formation of, in sugar cane, photosynthesis in)

IT 50-99-7P, D-Glucose 57-48-7P, Fructose 57-50-1P, Sucrose

RL: PREP (Preparation)
(in sugar cane, photosynthesis and)

L3 ANSWER 85 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1954:61044 CAPLUS

DOCUMENT NUMBER: 48:61044

ORIGINAL REFERENCE NO.: 48:10859b-c

TITLE: Incorporation of carbon14 into various
carbohydrates of tobacco leaves after
different periods of photosynthesis in C1402

AUTHOR(S): Vittorio, P. V.; Krotkov, G.; Reed, G. B.

CORPORATE SOURCE: Queens Univ., Kingston, ON

SOURCE: Science (Washington, DC, United States) (1954
) , 119, 906-8

CODEN: SCIEAS; ISSN: 0036-8075

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI Incorporation of carbon14 into various carbohydrates of tobacco
leaves after different periods of photosynthesis in C1402

SO Science (Washington, DC, United States) (1954), 119, 906-8

CODEN: SCIEAS; ISSN: 0036-8075

AB cf. C.A. 48, 8341d. In tobacco leaves, C14 from C1402 appears in a
polysaccharide before it does in sucrose, glucose, or fructose.
It was found that in up to 3 hrs. of photosynthesis the specific activity
of the "starch" was consistently higher than the sugars, but at
the end of 6 hrs. all the specific activities were about equal. In the
EtOH exts. the activity. . . in sucrose and later in fructose and
glucose. It was suggested that the free glucose and fructose arose by
sucrose hydrolysis.

IT Tobacco

(carbon dioxide (C1402) assimilation by)

IT Polysaccharides

(carbon dioxide (C1402) incorporation into, in
tobacco leaves)

IT Photosynthesis

(carbon dioxide assimilation in, by tobacco leaf)

IT 14762-75-5, Carbon, isotope of mass 14

(as indicator, of CO2 incorporation into carbohydrates in
tobacco leaves)

IT 57-48-7, Fructose

(carbon dioxide (C1402) incorporation into, in
tobacco leaves)

IT 57-50-1P, Sucrose

RL: PREP (Preparation)

(formation of, from CO2 by tobacco leaves)

IT 50-99-7P, D-Glucose

RL: PREP (Preparation)

(formation of, from carbon dioxide in tobacco
leaves)

L3 ANSWER 86 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1953:11185 CAPLUS

DOCUMENT NUMBER: 47:11185

ORIGINAL REFERENCE NO.: 47:1996a-d

TITLE: Solid-liquid reaction processes

INVENTOR(S): Stanton, Robert

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
	US 2615907		19521028	US 1947-733746	19470311 <--
PI	US 2615907 <u>19521028</u>				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 2615907		19521028	US 1947-733746	19470311 <--
AB	. . . 100°, to produce urea; the reaction between Al ₂ O ₃ , C, and N to prepare AlN and CO (the AlN may be <u>hydrolyzed</u> to give NH ₃ and Al(OH) ₃); the treatment of coke with steam containing 2% H ₃ PO ₄ at 1100° to produce active C; . . . Cl at 35-50° to prepare SCl; the reaction of Mg with EtCl to prepare the Grignard reagent; the treatment of <u>carbohydrates</u> , such as sawdust, cotton linters, or grain, with mixed acid (HNO ₃ and H ₂ SO ₄) to prepare oxalic acid; the treatment of milo maize with dilute aqueous HCl to give invert <u>sugar</u> ; the reaction of CaC ₂ with H ₂ O vapor containing an acid, such as HCl or HOAc, to give the vinyl ester. . .				
IT	Sorghum (invert- <u>sugar</u> manufacture from)				
IT	<u>Carbohydrates</u> Grains Linters Sawdust (oxalic acid manufacture from)				
IT	8013-17-0, <u>Sugar</u> , invert (from milo maize)				
IT	12740-44-2P, Sodium alloys, lead- RL: <u>PREP (Preparation)</u> (in PbEt ₄ manufacture)				
IT	12740-44-2P, Lead alloys, sodium- RL: <u>PREP (Preparation)</u> (in manufacture of PbEt ₄)				
IT	75-00-3P, Ethane, chloro- RL: <u>PREP (Preparation)</u> (in tetraethyllead manufacture)				
IT	13693-11-3P, Titanium sulfate, Ti(SO ₄) ₂ RL: <u>PREP (Preparation)</u> (manufacture from ilmenite or rutile)				
IT	78-00-2P, Lead, tetraethyl- 144-62-7P, Oxalic acid 10025-67-9P, Sulfur chloride, S ₂ Cl ₂ RL: <u>PREP (Preparation)</u> (manufacture of)				
IT	24304-00-5P, Aluminum nitride RL: <u>PREP (Preparation)</u> (manufacture of, and manufacture of NH ₃ and Al(OH) ₃ from)				
IT	156-62-7P, Calcium cyanamide RL: <u>PREP (Preparation)</u> (manufacture of, and urea manufacture from)				
IT	7664-38-2P, Phosphoric acid RL: <u>PREP (Preparation)</u> (manufacture of, and use in activated-C manufacture)				
IT	21645-51-2P, Aluminum hydroxide RL: <u>PREP (Preparation)</u>				

(manufacture of, from AlN)
 IT 630-08-0P, Carbon monoxide
 RL: PREP (Preparation)
 (manufacture of, from Al₂O₃, C and N)
 IT 54-21-7P, Sodium salicylate
 RL: PREP (Preparation)
 (manufacture of, from CO₂ and Na phenoxide)
 IT 57-13-6P, Urea
 RL: PREP (Preparation)
 (manufacture of, from CaCN₂)
 IT 124-38-9, Carbon dioxide
 (reactions of, with Na phenoxide)
 IT 1317-80-2P, Rutile 12168-52-4P, Ilmenite
 RL: PREP (Preparation)
 (titanium sulfate manufacture from)

L3 ANSWER 87 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1953:11184 CAPLUS
 DOCUMENT NUMBER: 47:11184
 ORIGINAL REFERENCE NO.: 47:1996a-d
 TITLE: Solid-liquid reaction processes
 INVENTOR(S): Stanton, Robert
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 2615906		19521028	US 1948-28613	19480522 <--
PI	US 2615906 <u>19521028</u>				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2615906		19521028	US 1948-28613	19480522 <--
AB	<p>. . . 100°, to produce urea; the reaction between Al₂O₃, C, and N to prepare AlN and CO (the AlN may be <u>hydrolyzed</u> to give NH₃ and Al(OH)₃); the treatment of coke with steam containing 2% H₃PO₄ at 1100° to produce active C; . . . Cl at 35-50° to prepare SCl; the reaction of Mg with EtCl to prepare the Grignard reagent; the treatment of <u>carbohydrates</u>, such as sawdust, cotton linters, or grain, with mixed acid (HNO₃ and H₂SO₄) to prepare oxalic acid; the treatment of milo maize with dilute aqueous HCl to give invert <u>sugar</u>; the reaction of CaC₂ with H₂O vapor containing an acid, such as HCl or HOAc, to give the vinyl ester. . .</p>				
IT	Sorghum				
	(invert- <u>sugar</u> manufacture from)				
IT	<u>Carbohydrates</u>				
	Grains				
	Linters				
	Sawdust				
	(oxalic acid manufacture from)				
IT	8013-17-0, <u>Sugar</u> , invert				
	(from milo maize)				
IT	12740-44-2P, Sodium alloys, lead-				
	RL: <u>PREP (Preparation)</u>				
	(in PbEt ₄ manufacture)				
IT	12740-44-2P, Lead alloys, sodium-				

RL: PREP (Preparation)
(in manufacture of PbEt4)

IT 75-00-3P, Ethane, chloro-
RL: PREP (Preparation)
(in tetraethyllead manufacture)

IT 13693-11-3P, Titanium sulfate, Ti(SO4)2
RL: PREP (Preparation)
(manufacture from ilmenite or rutile)

IT 78-00-2P, Lead, tetraethyl- 144-62-7P, Oxalic acid 10025-67-9P, Sulfur
chloride, S2Cl2
RL: PREP (Preparation)
(manufacture of)

IT 24304-00-5P, Aluminum nitride
RL: PREP (Preparation)
(manufacture of, and manufacture of NH3 and Al(OH)3 from)

IT 156-62-7P, Calcium cyanamide
RL: PREP (Preparation)
(manufacture of, and urea manufacture from)

IT 7664-38-2P, Phosphoric acid
RL: PREP (Preparation)
(manufacture of, and use in activated-C manufacture)

IT 21645-51-2P, Aluminum hydroxide
RL: PREP (Preparation)
(manufacture of, from AlN)

IT 630-08-0P, Carbon monoxide
RL: PREP (Preparation)
(manufacture of, from Al2O3, C and N)

IT 54-21-7P, Sodium salicylate
RL: PREP (Preparation)
(manufacture of, from CO2 and Na phenoxide)

IT 57-13-6P, Urea
RL: PREP (Preparation)
(manufacture of, from CaCN2)

IT 124-38-9, Carbon dioxide
(reactions of, with Na phenoxide)

IT 1317-80-2P, Rutile 12168-52-4P, Ilmenite
RL: PREP (Preparation)
(titanium sulfate manufacture from)

L3 ANSWER 88 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1953:3877 CAPLUS

DOCUMENT NUMBER: 47:3877

ORIGINAL REFERENCE NO.: 47:688h-i

TITLE: Utilization of carbon dioxide in
the synthesis of proteins by Escherichia coli. I

AUTHOR(S): Abelson, Philip H.; Bolton, Ellis T.; Aldous, Elaine

CORPORATE SOURCE: Carnegie Inst. of Washington, Washington, DC

SOURCE: Journal of Biological Chemistry (1952), 198,
165-72

CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI Utilization of carbon dioxide in the synthesis of
proteins by Escherichia coli. I

SO Journal of Biological Chemistry (1952), 198, 165-72

CODEN: JBCHA3; ISSN: 0021-9258

AB E. coli grown in the presence of glucose as an energy source oxidizes

about half the sugar to CO₂, directly utilizing the remainder as a C source. E. coli incorporates exogenous CO₂ during synthesis. For each mole of glucose metabolized, 0.21 mole of C₁₄O₂ is fixed, principally in nucleic acids and proteins. Examination of protein hydrolyzates showed that aspartic and glutamic acids, arginine, lysine, proline, and threonine contained C₁₄ and accounted for virtually all the C₁₄. . .

IT 14762-75-5P, Carbon, isotope of mass 14

RL: PREP (Preparation)

(as indicator, of CO₂ assimilation in protein synthesis by Escherichia coli)

IT 124-38-9P, Carbon dioxide

RL: PREP (Preparation)

(protein formation from, by Escherichia coli)

L3 ANSWER 89 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1952:70591 CAPLUS

DOCUMENT NUMBER: 46:70591

ORIGINAL REFERENCE NO.: 46:11730f-g

TITLE: Quantitative paper chromatography of D-glucose and its oligosaccharides

AUTHOR(S): Dimler, R. J.; Schaefer, W. C.; Wise, C. S.; Rist, C. E.

CORPORATE SOURCE: Northern Regional Research Lab., Peoria, IL

SOURCE: Anal. Chem. (1952), 24, 1411-14

CODEN: ANCHAM; ISSN: 0003-2700

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

SO Anal. Chem. (1952), 24, 1411-14

CODEN: ANCHAM; ISSN: 0003-2700

AB The apparatus previously described (C.A. 45, 5072e) has been used to sep. the products of starch hydrolysis; BuOH:pyridine:H₂O, 6:4:3 by volume, or fusel oil (b. 121-9°):pyridine:H₂O, 1:1:1 are employed as solvents. Guide strips were sprayed to locate the band for each sugar, and the band was cut out and eluted by the method of Dent (C.A. 42, 663d). The eluted carbohydrate was determined with anthrone, giving results within 5% of the true value for known amts. of the compound

IT Sugars

(analysis, determination of glucose and oligosaccharides)

IT 124-38-9P, Carbon dioxide 630-08-0P, Carbon monoxide

RL: PREP (Preparation)

(formation of, from carbohydrates by caramel decomposition)

L3 ANSWER 90 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1949:27708 CAPLUS

DOCUMENT NUMBER: 43:27708

ORIGINAL REFERENCE NO.: 43:5099h-i, 5100a-b

TITLE: Incorporation of acetate and butyrate carbon into rat liver glycogen by pathways other than carbon dioxide fixation

AUTHOR(S): Lifson, Nathan; Lorber, Victor; Sakami, Warwick; Wood, Harland G.

SOURCE: Journal of Biological Chemistry (1948), 176, 1263-84

CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI Incorporation of acetate and butyrate carbon into rat liver glycogen by pathways other than carbon dioxide fixation
SO Journal of Biological Chemistry (1948), 176, 1263-84
CODEN: JBCHA3; ISSN: 0021-9258
AB . . . glucose plus either acetate or butyrate labeled with C13. The glycogen of the livers was isolated, following the feeding, and hydrolyzed to glucose, and the glucose degraded. After administration of CH3C13OOH, CH3CH2CH2C13OOH, or CH3C13H2CH2COOH, all of the excess C13 in the . . . butyrate can enter glycogen by a pathway other than CO2 fixation. These results are consistent with the formation of 3-C carbohydrate fragments from acetate and butyrate via the tricarboxylic acid cycle, and synthesis of the 6-C glycogen units from two 3-C. . .
IT 64-19-7P, Acetic acid
RL: PREP (Preparation)
(derivs., protein formation from, in liver)
IT 9005-79-2P, Glycogen
RL: PREP (Preparation)
(formation of, from acetate and butyrate in liver)
IT 107-92-6P, Butyric acid
RL: PREP (Preparation)
(glycogen (liver) formation from)
IT 14762-74-4P, Carbon, isotope of mass 13
RL: PREP (Preparation)
(in glycogen formation from acetate and butyrate in liver)

L3 ANSWER 91 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1940:257 CAPLUS
DOCUMENT NUMBER: 34:257
ORIGINAL REFERENCE NO.: 34:30a-b
TITLE: The photosynthesis of carbohydrates from hydrated CO2
AUTHOR(S): Baly, E. C. C.
SOURCE: Chemical Products and Chemical News (1939), 2, 117-19
CODEN: CPCNA8; ISSN: 0366-7790
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

TI The photosynthesis of carbohydrates from hydrated CO2
SO Chemical Products and Chemical News (1939), 2, 117-19
CODEN: CPCNA8; ISSN: 0366-7790
AB . . . of hydrated CO2 an organic compound is photosynthesized. The first product of the synthesis, which gives the Molisch reaction after hydrolysis, is unstable and changes slowly at room temperature and rapidly at 60° to a stable compound This colorless stable compound can be hydrolyzed by taka-diaxase to a reducing sugar and is probably therefore a type of starch.
IT 124-38-9P, Carbon dioxide
RL: PREP (Preparation)
(mixts. with water, photosynthesis of carbohydrates from)

L3 ANSWER 92 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1940:256 CAPLUS
DOCUMENT NUMBER: 34:256
ORIGINAL REFERENCE NO.: 34:30a-b
TITLE: The photosynthesis of carbohydrates from hydrated CO2

AUTHOR(S): Baly, E. C. C.
SOURCE: Proc. Roy. Soc. (London) (1939), A172, 445-65
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
TI The photosynthesis of carbohydrates from hydrated CO2
SO Proc. Roy. Soc. (London) (1939), A172, 445-65
AB . . . of hydrated CO2 an organic compound is photosynthesized. The first product of the synthesis, which gives the Molisch reaction after hydrolysis, is unstable and changes slowly at room temperature and rapidly at 60° to a stable compound. This colorless stable compound can be hydrolyzed by taka-diastase to a reducing sugar and is probably therefore a type of starch.
IT 124-38-9P, Carbon dioxide
RL: PREP (Preparation)
(mixts. with water, photosynthesis of carbohydrates from)

L3 ANSWER 93 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1937:53653 CAPLUS
DOCUMENT NUMBER: 31:53653
ORIGINAL REFERENCE NO.: 31:7464b-d
TITLE: The carbon metabolism of the crown-gall and hairy-root organisms
AUTHOR(S): Conner, H. A.; Riker, A. J.; Peterson, W. H.
SOURCE: Journal of Bacteriology (1936), 34, 221-36
CODEN: JOBAAY; ISSN: 0021-9193
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
SO Journal of Bacteriology (1936), 34, 221-36
CODEN: JOBAAY; ISSN: 0021-9193
AB . . . cells and gum from cultures of II and approx. 30% from cultures of I. From 70 to 80% of the sugar fermented goes to form other products some of which were isolated and partly characterized. These metabolites differ from the bacterial gum in that they do not yield reducing sugars on hydrolysis. The bacterial gum consists chiefly of glucose units (72-98%) with small amts. of uronic acid (5%). Qual. tests for other. . .
IT 64-19-7P, Acetic acid 127-17-3P, Pyruvic acid
RL: PREP (Preparation)
(formation of, by crown gall and hairy root organisms)
IT 124-38-9P, Carbon dioxide
RL: PREP (Preparation)
(formation of, by crown gall and hairy-root organisms)

L3 ANSWER 94 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1933:27478 CAPLUS
DOCUMENT NUMBER: 27:27478
ORIGINAL REFERENCE NO.: 27:2503f-h
TITLE: Effect of carbon dioxide content of storage atmosphere on carbohydrate transformation in certain fruits and vegetables
AUTHOR(S): Miller, Erston V.; Brooks, Charles
SOURCE: Journal of Agricultural Research (Washington, D. C.) (1932), 45, 449-59
CODEN: JAGRAC; ISSN: 0095-9758
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

TI Effect of carbon dioxide content of storage atmosphere
on carbohydrate transformation in certain fruits and vegetables

SO Journal of Agricultural Research (Washington, D. C.) (1932), 45,
449-59
CODEN: JAGRAC; ISSN: 0095-9758

AB . . . with CO₂ gas at different temps. (0-25° in steps of
5°) for periods of 1-6 days and subsequently analyzed for
sugars and acid-hydrolyzable polysaccharides.
Treatment at the higher temps. was usually for 1-3 days and that at lower
temps. was usually for 2-6 days. No significant difference in percentage
of reducing sugar, total sugar, or acid-
hydrolyzable polysaccharides was observed when sour
cherries, sweet cherries and Belle peaches were treated with CO₂ in
concns. of 35-47%. Similar concns. of CO₂ retard the rate of
sugar loss in peas and sweet corn. Peaches, corn and peas
withstand treatments with 35-47% CO₂ at 5° for 4-5 days. . .

IT Corn
(carbohydrate transformation in sweet, effect of CO₂ content
of storage atmospheric on)

IT Cherries
Peach
Peas
(carbohydrate transformation in, effect of CO₂ content of
storage atmospheric on)

IT Carbohydrates
(transformation of, in fruits and vegetables, effect of CO₂ content of
storage atmospheric on)

IT 124-38-9P, Carbon dioxide
RL: PREP (Preparation)
(in storage atmospheric, effect on carbohydrate transformation in
fruits and vegetables)

L3 ANSWER 95 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1931:43349 CAPLUS

DOCUMENT NUMBER: 25:43349

ORIGINAL REFERENCE NO.: 25:4912f-h

TITLE: Studies on the hemicelluloses. I. The evolution of
carbon dioxide by plant materials
and some hemicelluloses under the action of boiling
twelve percent hydrochloric acid

AUTHOR(S): Anderson, Ernst

SOURCE: Journal of Biological Chemistry (1931), 91,
559-68
CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI Studies on the hemicelluloses. I. The evolution of carbon
dioxide by plant materials and some hemicelluloses under the
action of boiling twelve percent hydrochloric acid

SO Journal of Biological Chemistry (1931), 91, 559-68
CODEN: JBCHA3; ISSN: 0021-9258

AB . . . material examined gave evidence of the presence of uronic acid
except ivory nuts, in which the hemicellulose is a true
polysaccharide. Some plant materials such as white-birch sawdust
and corn-cobs contain 2 or more hemicelluloses, which may be isolated by
varying the method of extraction, and others like cottonseed hulls contain but
1. Partial hydrolysis of some of the isolated hemicelluloses

yielded reducing sugars together with aldobionic acids similar to those isolated from some of the plant gums so that it thus appears that. . .

IT Plants

(carbon dioxide evolution from materials of)

IT 9034-32-6P, Hemicelluloses

RL: PREP (Preparation)

(carbon dioxide evolution from)

IT 124-38-9P, Carbon dioxide

RL: PREP (Preparation)

(evolution of, from plant materials and some hemicelluloses)

L3 ANSWER 96 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1929:6151 CAPLUS

DOCUMENT NUMBER: 23:6151

ORIGINAL REFERENCE NO.: 23:728a-b

TITLE: The solubility of carbon dioxide
in sugar solutions and its combination with
amino acids

AUTHOR(S): Majer, Vladimir

SOURCE: Listy Cukrovarnicke (1928), 47, 123-36

CODEN: LICUAB; ISSN: 0024-4449

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

TI The solubility of carbon dioxide in sugar
solutions and its combination with amino acids

SO Listy Cukrovarnicke (1928), 47, 123-36

CODEN: LICUAB; ISSN: 0024-4449

AB . . . forms as carbamides. The absorption of CO₂ at 80° was
lowered in the presence of aspartic and glutamic acids and
hydrolytic products of sucrose and pectin. The amount of CO₂ in
phys. solution and that bound by amino groups are lower. . .

IT 57-50-1, Sucrose

(carbon dioxide solubility in solns. of)

IT 54399-65-4P, Aspartic acid, N-carboxy- 89497-16-5P, Glutamic acid,
N-carboxy-

RL: PREP (Preparation)

(formation in sugar solns.)

IT 124-38-9, Carbon dioxide

(solubility of, in sugar solns. and its combination with amino
acids)

L3 ANSWER 97 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1923:1698 CAPLUS

DOCUMENT NUMBER: 17:1698

ORIGINAL REFERENCE NO.: 17:324a-c

TITLE: Fatty acids; carbonic acid; hydrogen

PATENT ASSIGNEE(S): Lefranc Et Cie

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
GB 186572		19230502	GB 1922-3136	19220202 <--
PI GB 186572		<u>19220202</u>		

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 186572		19230502	GB 1922-3136	19220202 <--
AB	<p>Waste cellulosic materials such as wood waste are <u>hydrolyzed</u> to impure sugary worts, which, after purification, are subjected to symbiotic bacterial fermentation to produce fatty acids, mainly butyric acid. The <u>hydrolysis</u> of the disintegrated wood waste is effected by means of dilute H₂SO₄ and superheated steam; the acid liquors are then neutralized with lime or chalk; the <u>sugar</u> solution is extracted from the product by exhaustion, and purified from gums, resins, mucilages, etc., by adding excess of milk. . . of the decanted solution through animal charcoal. The purified wood wort is then treated with the ferments obtained by inoculating <u>sugar</u> solns. containing mineral salts with bacilli of the intestinal digestion of herbivora or contained in garden earth; by this means, all the reducible <u>sugars</u> of the wood wort are converted into acids, viz., butyric, acetic, propionic, valeric, and caproic acids. The fermented wort is. . .</p>				
IT	<p>107-92-6P, Butyric acid 1333-74-0P, Hydrogen RL: <u>PREP (Preparation)</u> (manufacture of, by fermentation)</p>				
IT	<p>124-38-9P, <u>Carbon dioxide</u> RL: <u>PREP (Preparation)</u> (recovery of, in fermentation)</p>				
L3	ANSWER 98 OF 98 CAPLUS COPYRIGHT 2007 ACS on STN				
ACCESSION NUMBER:	1907:3543 CAPLUS				
DOCUMENT NUMBER:	1:3543				
ORIGINAL REFERENCE NO.:	1:873i,874a-h				
TITLE:	The Synthesis of Protein through the Action of Trypsin				
AUTHOR(S):	Taylor, Alonzo Englebert				
CORPORATE SOURCE:	Lab. of Pathol., Univ. California				
SOURCE:	Pr. Soc. Exp. Biol. Med., New York City, Feb., 1907 (<u>1907</u>)				
DOCUMENT TYPE:	Journal				
LANGUAGE:	Unavailable				
SO	Pr. Soc. Exp. Biol. Med., New York City, Feb., 1907 (<u>1907</u>)				
AB	<p>Of the three large groups of organic substances concerned in the living plant or body, <u>carbohydrates</u>, fats and proteins, successful catalytic reversions have been accomplished in only the first two. Of <u>carbohydrates</u> the following have been synthesized by ferment action: starch, glycogen, cane <u>sugar</u>, maltose, lactose and glucosides. Fats of both the mon-atomic alcohols and of glycerol have been synthesized by ferment' action. A. . . has been obtained. Four hundred g. of the protaminic sulphate of the striped bass were digested with trypsin until the <u>hydrolysis</u> of the substrate was completed. At the close of the digestion, the solution was miscible with five volumes of acidulated. . . boiling point, freed of its sulphuric acid by the addition of barium, the excess of barium removed by saturation with <u>carbon dioxide</u>, filtered hot and the filtrations repeated until the fluid was clear. This solution then represented a solution of amino acids, free and combined with <u>carbon dioxide</u>, the products of the <u>hydrolysis</u> of the protamine. The solution was clear, and had an alkaline reaction. This solution was then concentrated until beginning precipitation. . .</p>				
IT	<p>9002-07-7P, Trypsin RL: <u>PREP (Preparation)</u> (protein synthesis by)</p>				

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COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

326.50

326.71

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

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(FILE 'HOME' ENTERED AT 11:11:54 ON 30 NOV 2007)

FILE 'CAPLUS' ENTERED AT 11:12:03 ON 30 NOV 2007

L1 434 (CARBOHYDRATE OR POLYSACCHARIDE OR SUGAR) AND HYDROLY? AND "CAR

L2 135 S L1 AND PREP/RL

L3 98 S L2 AND PY<=2003

FILE 'STNGUIDE' ENTERED AT 11:13:53 ON 30 NOV 2007

=>

---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

2.46

329.17

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-75.66

STN INTERNATIONAL LOGOFF AT 11:38:16 ON 30 NOV 2007